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98th Congress } COMMITTEE PRINT { S. Prt.
2d Session } { 98–261

ENERGY INITIATIVES OF THE 97TH CONGRESS

PRINTED AT THE REQUEST OF THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

OCTOBER 1984

Printed for the use of the Committee on
Energy and Natural Resources

U.S. GOVERNMENT PRINTING OFFICE
40-838 O WASHINGTON : 1984

5312-1

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MEMORANDUM OF THE CHAIRMAN

To Members of the Senate Committee on Energy and Natural Resources:

The 97th Congress, the first 2 years of the Reagan administration, witnessed a redirection on national energy policies to place greater reliance on the marketplace. Initial legislative emphasis was on the congressional budgetary process which involved detailed consideration of many of the issues associated with the Federal Government's policies and programs for energy conservation, research and development, and regulation, including oversight review of the pricing provisions of the Natural Gas Policy Act of 1978.

The major legislative accomplishments during the 97th Congress included enactment of—

The Energy Emergency Preparedness Act of 1982 (Public Law 97-229);

National Nuclear Waste Policy Act of 1982 (Public Law 97-425);

An Act to approve the President's recommendations for a waiver of law pursuant to the Alaska Natural Gas Transportation Act of 1976; and

Title X of the Omnibus Reconciliation Act of 1981 (Public Law 97-35) providing Department of Energy authorizations for fiscal years 1982, 1983, and 1984.

This legislative record laid the foundation for a 4-year program which resulted in further legislative accomplishments in the 98th Congress.

The enclosed report prepared by the Congressional Research Service reviews Federal energy legislative activities during the 2 years of the 97th Congress. The information contained therein provides a review from the perspective of the Congressional Research Service of the first 2 years of the Reagan Administration. Using this document as background material, I have further requested that a similar review be prepared by CRS which encompasses both the 97th and 98th Congresses.

I hope that this report is helpful to you in understanding the continuing evolution of national energy policies.

JAMES A. MCCLURE, *Chairman.*

LETTER OF TRANSMITTAL

Congressional Research Service,
The Library of Congress,
Washington, DC, April 17, 1984.

Hon. James A. McClure,
Chairman, Committee on Energy and Natural Resources,
U.S. Senate, Washington, DC.

Dear Mr. Chairman: I am pleased to transmit to you the sixth in a series of reports, prepared for your Committee by the Environment and Natural Resources Policy Division of the Congressional Research Service, on the legislative activities of the Congress in energy policy. The current report, "Energy Initiatives of the 97th Congress," covers the period following the change of Administration and the change of majority in the Senate. These 2 years (1981 and 1982) were especially important because of the strong contrast that the policies of the new Administration had with those of the previous one. This change of direction produced a good deal of controversy in the Congress, but it also yielded a substantial amount of new legislation. This period also included the economic aftermath of the Iranian Revolution and its impact on the energy policy of the United States. The report is designed to be a summary of the main developments in the Government policies, economics, and politics of energy in recent years, as well as an analysis of the congressional response to those developments.

The report is divided into 9 chapters. In a brief introduction, the major features of the Reagan energy policy and the congressional response to it are summarized. This is followed by chapters on the energy budget, fossil energy policy, electric utility and nuclear energy policy, renewable energy policy, energy conservation policy, energy and the environment, and the reorganization of the Department of Energy.

Contributors to the report include Susan Abbasi, Robert Bamberger, Carl Behrens, Maria Grimes, Lawrence Kumins, David Lindahl, Julia Newcomb, Gary Pagliano, Larry Parker, Malcolm Simmons, Duane Thompson and Robert Trumbule of the Environment and Natural Resources Policy Division; Robert Civiak, Langdon Crane, John Justus, Barbara Luxenberg, James Mielke, J. Glen Moore, Paul Rothberg, Migdon Segal, Fred Sissine, and Marcia Smith of the Science Policy Research Division; Warren Donnelly, Alvin Kaufman, Karen Nelson, and Joseph Pilat of the Senior Specialists Division, and Bernard Gelb of the Economics Division. The report was edited and coordinated by Robert Trumbule and David Lindahl.

I hope this review of energy activities will be useful to the Committee and the Congress as it deals with the continuing and evolving issues affecting America's energy future.

Sincerely,

Gilbert Gude,
Director.

[Enclosure.]

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CHAPTER I. THE 97TH CONGRESS: A CHANGE OF COURSE*

The general election of 1980 brought about a major change in the executive and legislative branches of government, with the Presidency and the Senate being won by the Republicans. This not only had the consequences normally associated with a change in power, but in this case, it also had the effect of bringing about a fundamentally different (and more conservative) philosophy of the role of the Federal Government. Nowhere was this more apparent or more striking than in the area of energy, where major changes were made or attempted in policy direction.

The Administration did not fully achieve the fundamental reorientation of national energy policy that it sought, but it was effective in using administrative actions and the energy budget as its principal tool to influence that policy. The Administration was able to convince Congress, or at least a working majority, that reductions in the Department of Energy's budget were necessary. As a result, many R and D efforts were curtailed or cancelled, especially those near commercialization, and it was left to the free market to determine whether or not those efforts would be accepted on their own merit. This was particularly true of fossil fuel R and D, which was sharply cut after bitter debate by Congress at the request of the Administration. The demise of the Solvent Refined Coal Programs (SRC-I and II) was a prime example.

The Administration was less successful in the area of renewable energy and conservation programs. Its attempt to essentially eliminate these programs was rebuffed by the Congress, which restored funding for most of them, although at somewhat reduced levels. The Administration's nuclear R and D program, a rare beneficiary of increased funding, drew sharp criticism in Congress, and the Clinch River Breeder Reactor Project in particular barely escaped cancellation at the end of the 97th Congress.

This trend toward reduced government involvement in the marketplace was especially evident in the effort to deregulate natural gas. Because efforts to deregulate other industries (including oil, railroads, and airlines) were at least perceived to be successful, the Administration, with considerable support in Congress, gave support to the deregulation of natural gas prices and promised to develop legislation to deal with a number of gas issues. Deregulation, however, remained controversial. Claims that deregulation would improve economic efficiency were met with counterclaims that it would force gas prices to rise unnecessarily. Many Members, recalling the bitter debate surrounding the Natural Gas Policy Act of 1978, were not eager to reopen the subject, especially since the original legislation had a phaseout schedule written into it which allows prices to rise over time. As a result, deregulation did not proceed very far on the legislative agenda. It did, however, become one of the most hotly debated issues of the 97th Congress, particularly during the lame-duck session in December 1982, when gas prices rose rapidly and unexpectedly.

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* by David M. Lindahl, Environment and Natural Resources Policy Division.

Another major concern of the Congress was the status of U.S. preparedness to deal with energy supply emergencies. This concern, born in the wake of the Arab Oil Embargo and the Iranian Revolution, was rekindled by the gradually escalating conflict between Iran and Iraq. The possibility of the war spreading to other oil exporters in the Persian Gulf and the threat of closure of the Straits of Hormuz were seen as potential precursors of another oil crisis. In January 1981, the new Administration announced its opposition to renewing price and allocation controls. Congress was in essential agreement with the Administration that controls had been an inappropriate response to shortages of the magnitude experienced during the 1970s, but it was concerned that some contingency authority might be needed during more severe shortages. This set the stage for the passage of the Standby Petroleum Allocation Act and its eventual veto by the President. The Energy Emergency Preparedness Act (P.L. 97-229), subsequently enacted, required the Administration to make more explicit emergency preparedness policies but did not extend or include any new oil price and allocation authorities.

The interrelationship of energy and the environment became strongly evident in the debate over clean air. The principal issue was acid precipitation, a subject of intense debate with strong regional polarization. Another major component of this issue was the Clean Air Act and the levels of emissions that would be legally tolerated. By the end of the Congress, no consensus was reached on ways to amend the Clean Air Act.

A continuing problem in the 97th Congress was access to energy minerals on Federal lands. The need for more domestic energy production to reduce the dependence on foreign oil and the need to preserve wilderness areas of unique quality for future generations were not easier to reconcile in this Congress than they had been in earlier ones. Leases for offshore oil and Western coal on Federal lands became the objects of intense controversy that has yet to be resolved.

Energy taxes and fees appeared in several different forms and, because of the huge dollar amounts involved, they attracted considerable attention. Attmpts were made to completely or partially exempt royalty owners and independent producers. Of even greater interest, however, was the proposal to reduce the defict through revenues generated by increasing the taxes on gasoline and additional fees imposed on imported oil. Other initiatives included general oil excise taxes, BTU taxes, and ad valorem taxes.

An issue that received a great deal of attention early in the 97th Congress was the Alaska Natural Gas Transportation System (ANGTS). Legislation was introduced on behalf of the sponsors of the project to grant waivers that would expedite financing the pipeline to carry Alaskan North Slope gas southward across Canada to U.S. markets. The unprecedented waivers, which extended the scope of project components that could be included in the rate base and which allowed for prebilling of consumers, were granted by a small margin after much acrimonious debate. Opponents of the ANGTS legislation stated that the waivers would greatly increase the cost of the gas to consumers and that ANGTS was not the most efficient means of moving that gas to market. The legislation passed, but the project had not moved forward as the 97th Congress drew to a close.

Nuclear waste management was a major topic of debate in the 97th Congress. Impatient with the slow and erratic course of the waste management program, the 97th Congress drafted legislation that would set firm and early deadlines for demonstration of disposal and other pending issues such as State and local participation, spent-fuel storage, and low-level waste. This culminated in the Nuclear Waste Policy Act of 1982.

Another nuclear energy topic that was of major interest to the Congress was breeder reactor research and development. The history of the breeder had been "on again--off again" because of continuing budget uncertainties. While the Congress did not technically kill the Clinch River Breeder Reactor Demonstration Program outright, it did require that no construction or additional orders take place.

Energy reorganization was a major issue early in the 97th Congress because of continued dissatisfaction with the performance of the Department of Energy in the oil shortages of 1974 and 1979. The Administration suggested an entirely different approach to dealing with energy by attempting to greatly reduce the Federal role. The Department was seen by the Administration as an obstacle rather than an aid to the private sector in dealing with energy supply and demand problems. Throughout most of the 97th Congress, the Administration urged the dismantlement of DOE. Legislation to transfer most of its functions to the Department of Commerce was proposed by the Administration, and hearings were held in both Houses of Congress, but the proposal went no further.

Many other important energy matters were considered by the 97th Congress. The table of contents of this report reveals the broad range of topics which were the subject of legislation and oversight. It is hoped that this retrospective look at the energy activities of the 97th Congress will provide a useful history and analysis of these issues and an understanding of the issues still facing the Congress.

CHAPTER II. THE ENERGY BUDGET: PRIORITIES UNDER FINANCIAL RESTRAINT*

The Budget as an Implementation Strategy: The Reagan Budget Requests

A primary vehicle the Administration employed to implement its approach to energy policy was the budget. In requesting significant changes in existing energy funding, the Administration's goals were twofold: (1) change energy budget priorities to reflect its view of government's role in energy policymaking, and (2) dismantle the energy policy infrastructure which supports energy priorities incompatible with its energy philosophy. Hence, the battle over the budget became more than a conflict over money, but included a debate over the nature and locus of energy policymaking as well.

FOCUS OF BUDGET REQUESTS

Three themes underlined the Administration's budget requests for FY82 and FY83: (1) research and development efforts should focus on long-term, high-risk technologies, (2) bureaucracy resulting from excessive government involvement in energy policy should be eliminated, (3) the budget should reflect the general austerity being asked of all other nondefense, nonentitlement programs. To achieve dramatic reductions in the DOE budget was impossible because over half of it was defense-related or earmarked for the Strategic Petroleum Reserve, but the remaining programs were targeted for sharp reductions.

The latest part of DOE's "discretionary" budget was for research and development. During the Carter years, funding for R&D was increased significantly, particularly for renewable energy resources, conservation, and fossil fuels. Funding for nuclear power was not increased because President Carter regarded conventional nuclear power as a fuel-source of last resort, and was opposed to the construction of the Clinch River Breeder Reactor. Indeed, during the Carter years, Congress thwarted repeated Administration efforts to kill the reactor.

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*By Larry Parker, Environment and Natural Resources Policy Division.

President Reagan's energy research and development priorities were based on a belief that government's role in research and development should be restricted to long-term, high-risk technologies. As a result of the Administration's interpretation of these terms, its proposals recommended the orderly elimination of many research and development programs for fossil fuels, conservation and renewables. These proposals suggesting the wholesale elimination of programs contrasted strongly with increased funding requests for advanced nuclear systems. The Administration defended this funding as fitting the long-term, high-risk criteria.

A second area of program reductions or eliminations came in the area of policymaking infrastructure. Areas slated for significant reductions under the Reagan Administration included the Energy Information Administration, Assistant Secretary for International Affairs, Assistant Secretary for Policy and Evaluation, Economic Regulatory Administration, and the Office of Special Council. These offices contained much of the institutional memory of DOE and its predecessors. However, to the Administration, they represented the relics of failed energy policies, and an unnecessary expense and burden on the country.

A final area of proposed reductions was for programs designed to assist consumers and nonprofit institutions with energy costs. Programs slated for elimination included all of the State and local programs. Weatherization funding was to be consolidated into a block grant program at the Department of Housing and Urban Development at substantially lower levels, and programs for nonprofit institutions (schools, hospitals, etc.) were to be cut. The Administration felt that such programs constituted social policy and therefore were an inappropriate concern of energy policy.

RATIONALE BEHIND BUDGET CUTS

As suggested, the Administration had several criteria for arriving at its proposed budget cuts. These criteria were based on a different view of the Federal Government's role in energy than that held by the previous Administration. This view was based on a belief that previous government energy policies had failed, and indeed had exacerbated the energy problem. To the Administration, energy was no different from any other commodity; energy demand and supply should be controlled by the needs of the economy as expressed in the marketplace. As stated by Energy Secretary Edwards:

FY82 Congressional Budget Actions

AUTHORIZATION THROUGH RECONCILIATION

Although the Reagan Administration succeeded in making some reductions in the FY81 budget (P.L. 97-12), the real push began with the FY82 budget. Before the Omnibus Budget Reconciliation Act of 1981, Congress had not passed an authorization bill for DOE since Fiscal 1978. In 1981, the normal congressional authorization process for DOE was interrupted by the need to pass a First Budget Resolution for FY82. In April, the Senate passed S. Res. 9, which called for $36.9 billion in overall reductions. In suggesting reductions for DOE, the Budget Committee's report recommended that funding for the Strategic Petroleum Reserve be shifted from public to private financing, along with the elimination of the alcohol fuels program and the Solar Energy and Conservation Bank, as recommended by President Reagan. In making these recommendations, the Budget Committee noted that its itemization did not have to be followed by the Energy and Natural Resources Committee as long as the reconciliation reductions were meet.

Also in April, the House Budget Committee reported out its own version of the First Budget Resolution (H. Res. 115). Its version required only $18 billion in spending reduction, although differences in methodology from the Senate's resolution led some Members to suggest that the real cut was $41 billion. Included in the cuts was reduced funding for the Strategic Petroleum Reserve, but increased funding for conservation. The committee's bill, however, was swept away on May 7 by the now famous Gramm-Latta substitute which mandated a $39.6 billion reduction--similar to the Senate-passed version. The resulting conference report ordered a spending reduction of $36 billion.

With an overall reduction target set, authorization committees were required to alter authorizations to meet the new budget targets. In the Senate, recommendations of the Energy Committee for the reconciliation bill (S. 1377) included the following: (1) authorized appropriations for the Department of Energy for FY82 through FY84, (2) established an off-budget mechanism filling for the Strategic Petroleum Reserve, (3) reduced authorizations for biomass and alcohol fuels programs, and the Solar Energy and Energy Conservation Bank (except for $50 million in FY82). Of the $3.7 billion saved by moving the SPR off-budget, $568.5 million was added to other DOE programs, including the Solar Bank. The remaining savings were increased on the Senate floor when a $309 million reduction was made in the nuclear-fission budget.

> Our commitment to seek free-market solutions to the Nation's energy problems reflects our recognition of three basic realities. First, many past policies, however well-intentioned, had demonstrably failed. . . . Second, the Nation cannot solve its energy problems apart from solving its overall economic problem. . . . Finally, as the experience of previous administrations suggest, when government dominates a sector of the economy and its officials make mistakes--as they sometimes do--the whole country suffers. 1/

The Administration's purpose in proposing large budget cuts in parts of the DOE budget was to make energy policy a subset of the Administration's overall economic policy. Hence, to accept the Reagan budget was essentially to accept the Reagan economic philosophy. This created problems in the Congress, where some Members viewed energy policy as too important to be left to the whims of what they saw as an imperfect marketplace subject to manipulation by powerful interests, both here and abroad. Thus began the budget battles of the 97th Congress.

1/ U.S. Department of Energy. Secretary's Annual Report to Congress. Washington, D.C.: U.S. Govt. Print. Off. August 1982. p. 1.

Reconciliation was much more difficult in the House. In attempting to fashion cuts for the House reconciliation bill, H.R. 3982, Energy and Commerce Committee Chairman John Dingell was unable to gather a majority around his proposed reduction package. Three Democrats in the committee refused to follow their chairman and supported a Republican alternative proposed by Representative James Broyhill. With a deadlocked committee (21 to 21), Chairman Dingell decided against a formal vote and instead wrote a letter to Budget Committee Chairman James R. Jones. In the letter, Chairman Dingell outlined his proposed budget reduction package, noting that a majority of the Committee's Democrats supported it. Chairman Jones accepted the letter as the Committee's proposal.

The battle was not over. Disappointed with the reductions made by the Democratic majority, Republicans and conservative Democrats decided to push for an alternative reconciliation package. Called Gramm-Latta II, it included the Republican substitute for Chairman Dingell's Energy and Commerce committee recommendations. After a fierce rules fight, the House was permitted an up-or-down vote on the Broyhill substitute. However, the vote was never taken. Because of provisions in the Dingell bill with respect to the Fuel Use Act, some conservative Democrats indicated their intention to vote for the Dingell version. Rather than risk a defeat just before the final vote on the entire package, the Republicans withdrew their substitute.

The House bill authorized appropriations only for FY82. In conference authorizations for FY82 through FY84 were agreed on. Table 1 shows the FY82 authorization levels for selected DOE functions.

TABLE 1. Authorization Levels Set by P.L. 97-35
For Selected Areas of DOE

(in millions of budget authority)

	1981 Actual	1982 Request	1982 Reconciliation
Fossil Fuels	993.8	435.3	479.0
Solar Energy	551.4	193.3	303.0
Nuclear Fission	950.5	1,094.9	1,088.0
Magnetic Fusion	394.1	460.0	473.5
Environmental R&D	226.8	230.8	230.8
Energy Conservation	709.3	195.0	558.0
Energy Information Administration	90.4	80.0	85.0
Departmental Administration	311.4	273.0	247.0

APPROPRIATIONS

P.L. 97-88: Energy and Water Development Appropriations

With the First Budget Reconciliation enacted, appropriations bills began to emerge from the House Appropriations Committee. On July 14, it reported H.R. 4144 (H. Rept. 97-177). The bill provided $13.2 billion for energy and water development programs, $233 million less than the President's request. A list of appropriations levels for selected DOE programs is provided in table 2.

TABLE 2. Committee and Conference Action on H.R. 4144

(in millions of budget authority)

Activity	March Request	House Version	Senate Version	Conference Version
Solar Energy	193.3	304.4	253.4	276
Nuclear Fission	1,094.9	1,111.8	1,042.8	1,066
Magnetic Fusion	460.0	465.5	452.0	456
Environmental R&D	230.8	230.2	224.8	225

On the House floor, debate centered on funding for the Clinch River Breeder Reactor and the Tennessee-Tombigee Waterway. The Appropriation Committee's report provided $228 million for CRBR and $189 million for Tenn-Tom. Challenges to both appropriations were made on the House floor, but lost by close votes (186-206 for CRBR, 198-208 for Tenn-Tom). On July 24, H.R. 4144 passed the House by a vote of 244-104.

The Senate Appropriations Committee did not report its version of H.R. 4144 until October 28 (S. Rept. 97-256). The delay was due to a Presidential request in September for further budget reductions. Responding to this request, the Senate committee reduced its funding level for H.R. 4144 to $12.4 billion, still $322 million over the President's revised request, but $900 million less than its previous level.

On the Senate floor, debate revolved around three issues: (1) nuclear weapons funding, (2) Clinch River Breeder Reactor, and (3) Tennessee-Tombigee Waterway. By a 49-43 vote, the Senate added $335 million to the nuclear weapons budget. However, as in the House, the Senate rejected attempts to delete funding for Clinch River and Tenn-Tom (46-48 for both projects). The Senate passed the amended H.R. 4144 on November 5 by a 71-22 vote.

The conference on H.R. 4144 was quick with agreement reached on November 18, and the report filed the next day (H. Rept. 97-345). The compromise subsequently passed both Houses and became P.L. 97-88. Table 2 summarizes the final budget levels.

P.L. 97-100: Department of Interior Appropriations

On June 25, the House Appropriations Committee reported H.R. 4035 (H. Rept. 97-163). The bill provided $11.2 billion for the Department of Interior, Energy, and other related agencies; $6.89 million less than the President's request. A list of appropriations levels for selected DOE programs is provided in table 3.

On the House floor, Members adopted amendments to delete $70 million from the Committee's recommendations, with $69 million of it consisting of the elimination of the proposed coal liquefaction plant in West Virginia. The House also added language to prevent Secretary Watt from reorganizing the Office of Surface Mining and Enforcement without the permission of Congress. An amendment to delete $135 million for the SRC-I coal liquefaction plant in Newman, Kentucky, was defeated 177-236. The bill passed the House on July 22 by a 358 to 46 vote.

The Senate Appropriations Committee reported H.R. 4035 on July 23 (S. Rept. 97-166). The Committee's bill appropriated $7.7 billion for the Departments of Interior, Energy, and related agencies, more than $3 billion below the Administration's request and the House-passed measure. This savings was the result of the decision to put SPR funding off-budget. Table 3 summarizes the appropriation levels for various DOE programs.

TABLE 3. Committee and Conference Action on H.R. 4035

(in millions of budget authority)

Activity	March Request	House Version	Senate Version	Conference Version
Fossil Fuels	435.4	463.8	436.0	416.9
Energy Conservation	195.0	272.9	130.3	145.4
(FY81 Deferral)		67.8	67.8	67.8
(tranfers)		99.6	172.6	173.0
Energy Information	80.0	85.0	79.9	78.9

The Senate leadership held H.R. 4035 off the Senate floor until it received the Administration's September request for additional budget cuts. Responding to these requests, the Senate adopted a two-percent reduction in the Committee's bill, turning back an additional five-percent cut suggested by Senator Mack Mattingly. Senator James McClure argued against any further cuts in the bill, and the Senate defeated attempts to eliminate the SRC-I project (40-57 vote). On October 27, the bill passed the Senate 87-8.

Conference action was quick, and the bill was reported November 4 (H. Rept 97-315). The House passed the conference version on November 12. However, the Administration informed the Congress that the conference version was over-budget and that the Administration would veto it. The Senate reacted to this by cutting four percent from the conference tools. This reduction was accepted by the House in a voice vote, December 11, and the bill became law (P.L. 97-100).

Supplemental Appropriations

In other DOE budget-related actions, the Congress passed an FY82 supplemental appropriations bill over President Reagan's veto. Besides containing an extra $1 million for fossil fuels R&D, the bill prevented anticipated reductions-in-force at the DOE. Also, the bill agreed to the transferring of mining R&D from DOE to DOI.

FY83 Congressional Budget Actions

In February 1982, the President submitted his DOE budget request for FY83. As with the 1982 request, the request proposed deep cuts in non-nuclear energy activities, particularly in conservation, solar, and fossil fuels. The budget also assumed the dismantlement of DOE, which removed many administrative activities from it. As with the FY82 request, this request generated great controversy in Congress.

RECONCILIATION WITHOUT AUTHORIZATION

The Omnibus Budget Reconciliation Act of 1981 established FY82 through FY84 authorization ceiling for DOE. Therefore, a separate authorization for DOE was not required for FY83. However, in accordance with the congressional budget process, the various House and Senate authorization committees held hearings on the FY83 budget request, submitting recommendations to their respective budget committees.

In the House, the Committees on Energy and Commerce, and Science and Technology intially recommended funding levels closer to the Reconciliation Act ceiling than the Administration's budget request. In essentially adopting the reconciliation funding levels, the House committees were exceeding the President's budget request by more than $2 billion. However, in the final Budget Committee report (H. Rept. 97-521), a freeze of DOE funding at the FY82 level was recommended. No specific recommendations regarding cuts were made by the Committee.

On the House floor, a number of sustitutes to the Budget Committee's H. Res. 345 were offered, including a Republican/conservative-Democratic alternative offered by Representative Latta. In an attempt to avoid a repetition of the defeat handed it the previous year, the Democratic leadership devised a complex rule to control the debate. However, because of all the amendments that passed as a result of the rule, the House rejected all of the substitutes and the Committee's bill on May 27. Since a First Budget Resolution is required before appropriations bills can be passed, the House tried again on June 10. On a close vote (220-207), the Latta amendment to H. Res. 352 was accepted. In contrast to the Budget Committee's bill, the Latta amendment made deep cuts in energy programs. The fossil fuels budget was reduced from $417 million in FY82 to $107 million--similar to the Administration's request. Solar programs were cut from $276 million in FY82 to $72 million in FY83. Conservation was cut from $387 million in FY82 to $312 million.

On the Senate side, the Senate Energy Committee rejected the President's budget request and recommended a current services budget for domestic spending, including energy programs, at its FY82 level (S. Rept. 97-385). Reporting on May 10, the Budget Committee made no recommendations regarding any redistribution of the funds from FY82 allocations.

On the Senate floor, the freezing of energy-related programs was not a major topic of discussion, and that part of the resolution was not changed. The entire resolution passed the Senate on May 21 by a 49-43 vote.

The signficant differences between the two resolutions required a conference. The result of the conference was a resolution closer to the Senate version in the area of energy (H. Rept. 97-614). The FY82 funding level was cut by about $500 million. This cut consisted of $300 million from utility user fees for nuclear waste management, $160 million in FERC fees, and a general reduction of $150 million.

This essential freezing of DOE's FY83 funding at FY82 levels as incorporated into the continuing resolution funding DOE until December 17, as the Congress failed to pass its appropriation bills before the elections.

APPROPRIATIONS

H.R. 7145: Energy and Water Development Appropriations

On September 21, 1982, the House Appropriations Committee reported H.R. 7145 (H. Rept. 97-850). The bill provided $13.6 billion for energy and water development programs, $70.1 million less than the President's request. A list of appropriations levels for selected DOE programs is provided in table 4.

TABLE 4. Committee and Conference Action on H.R. 7145

(in millions of budget authority)

Activity	Request	House	Senate	Conference
Solar Energy	72.2	180.4	187.9	
Nuclear Fission*	830.2	751.5	666.6	no conference
Nuclear Fusion	444.1	469.1	462.8	
Environment	168.8	181.5	189.5	

* For FY83 the Appropriations Committee created a new account for some activities formerly in the Nuclear Fission account. The old account has been reconstructed here so it can be compared with last year's account. The account does include revenues from nuclear disposal fees of $300 million in FY83.

The Senate Appropriations Committee reported its version of the bill on December 6 (S. Rept. 97-673). The Appropriations Committee's report provided $13.5 billion for energy and water development activities, $135 million below the President's request. Table 4 summarizes these appropriations for selected DOE activities.

Facing severe time constraints, neither House acted on an Energy and Water Development Appropriations Bill during the remaining part of the 97th Congress. Instead, this part of DOE was funded through a continuing resolution passed by the Senate, December 19, and by the House, December 20 (H.J. Res. 631). The resolution provided for the funding of affected DOE activities at their FY82 levels, H.R. 7356 was then passed by the House on December 18 by a 282-63 vote and by the Senate on December 19 by voice vote.

Administration's Effectiveness in the Budget Process

An examination of the reductions achieved by the Administration during the 97th Congress reveals that the Administration achieved most of what it set out to do. Reductions in energy-related activities were significant, particularly when compared with FY80 appropriations.

However, the priorities within those reduced funding levels were not as the Administration requested. Throughout the 97th Congress, members showed a stubborn resistance to the Reagan energy philosophy while agreeing that the energy budget had to reflect the austerity being asked of the rest of the nondefense, nonentitlement budget. The Congress persistently increased the amount of money appropriated for fossil fuels, solar, and conservation over that recommended by the Administration.

Perhaps more importantly, the Congress refused to dismantle the energy policy infrastructure which supported various energy programs, as recommended by the Administration. Indeed, the Congress took the unusual step of prescribing personnel levels within the DOE to prevent the de facto dismantlement of that agency.

In the past, budget battles have been fought on the margin, with the Congress "fine-tuning" Administration requests. Budget battles tended to focus on individual projects, rather than entire programs. This was not the case during the 97th Congress. To implement his free-market philosophy, the President requested the wholesale elimination of much of the energy policy structure as it had developed since 1973. This the Congress refused to do. Instead, it sought to distribute the cuts in a balanced manner, and maintain a diversity of energy activities.

Although the Administration was successful in reducing the energy budget, it was not successful in convincing the Congress to adopt the Administration's energy philosophy.

Prospects and Pending Issues

During his confirmation hearings, the new Secretary of Energy, Donald Hodel, stated that it behooved the Administration to find a way to come up with a budget more in line with congressional desires. If the Administration acts on this realization, then the budget battles of the 98th Congress may return to the battle at the margins which characterized earlier budget requests. If the Administration stays with a budget which includes what Congress considers an unbalanced energy program, then the battles will be of the same intensity as those in the 97th Congress.

CHAPTER III. FOSSIL ENERGY POLICY

Fossil Energy Research, Development, and Demonstration*

BACKGROUND

Over the last five fiscal years, the Federal Government spent about $4.0 billion on fossil energy research, development, and demonstration (RD and D). The Department of Energy (DOE) served as the lead agency advancing new processes to use this Nation's coal, oil shale, petroleum, tar sands, and heavy oil resources. DOE funded a variety of efforts, ranging from laboratory work through design studies needed for large scale demonstration projects.

During the early days of the 97th Congress, the Reagan Administration called for a major reduction in the Federal Government's role in fossil energy RD and D. The Administration stated in A Program for Economic Recovery and its National Energy Policy Plan III that it wanted to rely more heavily on private capital and less on Federal tax dollars to advance fossil energy technology. 1/ The Administration claimed that the economic, regulatory, and tax incentives provided for in its national economic and energy policies would encourage increased development and production of fossil energy resources and technologies. These incentives include: decontrol of energy prices, fuels subsidies offered by the United States Synthetic Fuels Corporation (SFC). 2/

LEGISLATION ENACTED

The 97th Congress passed four major laws that affect DOE's fossil energy program budget. These laws are:

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* By Paul F. Rothberg, Science Policy Research Division.

1/ A Program for Economic Recovery. February 1981: 4-12.

2/ U.S. Department of Energy. The National Energy Policy Plan. July 1981. p. 11.

--P.L. 97-35 "Omnibus Budget Reconciliation Act of 1981";

--P.L. 97-100 "Department of the Interior and Related Agencies Appropriations";

--P.L. 97-257 "Supplemental Appropriations Act of 1982"; and

--P.L. 97-394 "Department of the Interior and Related Agencies Appropriations Act of 1983."

These laws provided the administrative and financial means needed to implement the major policy shifts requested by the Reagan Administration. As a result of these laws, DOE reduced or eliminated many aspects of its fossil energy program and changed its focus to long-term, high-risk R and D projects, instead of the demonstration of advanced technologies. The Administration convinced the first session of the 97th Congress to terminate most of DOE's support for five coal-based demonstration projects. The Carter Administration had planned for these projects to be the major components of DOE's fossil energy program.

During the second session of the 97th Congress, the Administration sought to further reduce DOE's fossil energy budget by about 75 percent from $417.7 million during FY 1982 to $106.9 million during FY 1983. The Administration maintained that the private sector could continue to expand its role in developing and marketing new fossil energy technologies with minimum government help. 3/ DOE claimed that its proposed FY 1983 program eliminates activities that overstep the Federal Government's proper role and targets and streamlines generic and technology based activities more appropriate for Federal support. 4/ The Administration also wanted to decrease Federal support for near-term proprietary technologies.

In response to the Administration's proposals, both the House and Senate Appropriation Committees sought to restore funding for many program areas. In P.L. 97-394 Congress provided about $311 million, including $93.8 million leftover from FY82, for a total appropriation of $217.5 million for DOE's FY 1983 fossil energy program. Congress restored funding for such areas as DOE's magnetohydrodynamics, oil shale, and coal-based technology efforts.

3/ Jan W. Mares. Statement before the Subcommittee on Interior and Related Agencies of the House Committee on Appropriations. May 3-4, 1982. p. 2. (Unpublished)

4/ Ibid.

DEPARTMENT OF ENERGY
FISCAL YEAR 1984 CONGRESSIONAL BUDGET REQUEST
SUMMARY OF ESTIMATES BY APPROPRIATION BY MAJOR ACTIVITY
FOSSIL ENERGY RESEARCH AND DEVELOPMENT
BUDGET AUTHORITY IN THOUSANDS OF DOLLARS

	FY 1982 Actual	FY 1983 Estimate	FY 1984 Request
COAL:			
Mining R&D	10,992	-----	-----
Coal Liquefaction	228,384	37,600	17,000
Surface Coal Gasification	54,168	39,000	16,900
Underground Coal Gasification	8,256	6,000	2,000
Advanced Research and Technology Development	56,256	39,950	30,540
Control Technology and Coal Preparation	25,152	27,900	17,050
Heat Engines and Heat Recovery	15,408	5,000	1,000
Combustion Systems	41,044	24,200	8,400
Fuel Cells	34,464	30,050	9,500
Magnetohydrodynamics	27,840	29,000	-----
Program Direction	11,804	8,200	7,060
Energy Technology Center Program Direction - Coal	-----	23,000	-----
Subtotal, Coal	513,768	266,600	109,450
PETROLEUM:			
Enhanced Oil Recovery	16,176	6,500	11,250
Oil Shale	19,152	12,250	8,600
Advanced Process Technology	4,032	5,000	2,900
Program Direction	1,555	600	600
Energy Technology Center Program Direction-Petroleum	-----	3,450	-----
Subtotal, Petroleum	40,915	27,800	23,350
GAS:			
Unconventional Gas Recovery	11,520	13,900	5,000
Capital Equipment	192	------	-----
Program Direction	442	200	200
Energy Technology Center Program Direction-Gas	-----	2,850	-----
Subtotal, Gas	12,154	16,950	5,200
Subtotal, Fossil Energy R&D	566,837	311,350	138,000
Use of Unobligated Balances	-----	-93,836	-31,000
Transfer from Alternative Fuels	-----	-----	-13,000
FY 1981 Deferrals	-149,100	-----	-----
Total, Fossil Energy R&D	417,737	217,514	94,000

Table 1 shows the combined impact of the laws passed by the 97th Congress on the various parts of DOE's fossil energy program, as well as the Reagan Administration's request for FY 1984. 5/

PROSPECTS AND PENDING ISSUES

Although the current Administration wants to reduce Federal support for fossil energy R,D, and D, many members of Congress want to assure that a comprehensive Federal program is maintained. As evidenced in P.L. 97-394, Congress demonstrated that it will restore funding for important fossil-energy program areas, when judged appropriate. The future prospects for Federal support of DOE's program are likely to depend on many factors, including: tight budgetary restrictions, the availability and price of conventional petroleum and gas supplies, and the success of the United States Synthetic Fuels Corporation in promoting a commercial synfuels industry.

The 98th Congress is likely to consider several issues regarding the future role of the Federal Government in fossil energy R and D. Congress is likely to be concerned with the overall size of the fossil-energy budget and the proposed funding level of specifics.

5/ U.S. Department of Commerce. Energy Research and Technology Administration. Congressional Budget Request. FY 1983, v. 5. February 1982. p. 14.

Oil Taxes and Fees*

CRUDE OIL WINDFALL PROFIT TAX

Background

In June 1979, in order to encourage domestic oil output and discourage importation of petroleum, President Carter began gradual decontrol of domestically-produced crude oil. Despite the steep world oil-price increase and supply interruptions during the middle and late 1970s consumption of, and relative dependence upon, foreign oil had continued to exceed 40 percent of total U.S. use of petroleum.

The removal of controls was expected to result in substantially higher revenues and profits for U.S. oil companies. The President and many in Congress held that much of the additional profit resulting from decontrol would be an unearned windfall that, for a variety of reasons, should be recovered through a tax.

The "Windfall Profit Tax" (WPT) was enacted as part of the Crude Oil Windfall Profit Tax Act of 1980 (P.L. 96-223, April 2, 1980). In effect, the tax is an excise tax imposed on the differences between the selling prices and "base" prices for various categories of domestically-produced crude oil. Categories are defined, to varying extents, according to the age, production volume, and location of wells, the oil quality, method of recovery, and the nature of the firm operating the well. The broad classifications, subject to different tax rates, are called "tiers."

Many oil industry interests and some members of Congress strongly objected to the windfall profit tax as a whole and to various aspects of the tax structure. Such objections persisted after enactment of the WPT. By December 1980, Congress passed, as part of the Omnibus Reconcilation Act of 1980 (P.L. 96-499), a temporary easing of the tax as it applies to royalty owners.

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Major Issues

The royalty owner issue: Originally, the Windfall Pro Profit Tax Act subjected a royalty owner to the WPT the same way it did integrated companies. Royalty owners include any owners of economic interests in oil properties that are defined as royalties for income tax purposes, they do not have an "operating interest." Such owners pay their share of the tax (proportionate to their interest in a property) by receiving a smaller amount from the payer of the royalty--usually the company that produced the oil. The company withholds the WPA in much the same way that an employer withholds employees' income tax. In most cases, royalty and similar interests were not eligible for the reduced windfall profit tax rates afforded independent producers.

Because the tax provisions of the Act were made effective March 1, 1980, royalty owners began to feel the impact of the tax on their royalty earnings as soon as the royalty statements and checks for March 1980 oil production started arriving in early to mid-April. The 1980 Omnibus Reconciliation Act gave royalty owners a tax credit (or refund) of up to $1,000 against their WPT liability on the removal of oil during calendar year 1980. The credit was available only to individuals, estates, and family corporations, but not to other corporations or trusts.

Production from stripper wells: Nearly three-fourths of the oil wells in the United States produce ten barrels of oil per day or less. These generally are old wells whose production has declined over the years as the oil remaining in the reservoirs they tap has decreased. As a group, these "stripper" wells account for about 14 percent of total U.S. oil production. Some argue that there is a greater desirability to keep them operating than their volume would seem to indicate. Once closed up, it is virtually never economical to reopen one, and the potential production lost.

Independent producers: So-called "independent" oil and gas producers are generally those that confine their business operations to exploration and production. In contrast, "major" (or integrated) producers also are involved in one or more "downstream" activities, such as refining, transportation, or marketing. The independents usually are smaller, and finance their operations to a greater extent with borrowed funds.

Independents account for 80-90 percent of the exploratory wells drilled and for more than half of total additions to proven reserves of oil and gas in the U.S. Given their role and means of financing, independents have for many years vigorously claimed that they deserve and need more lenient tax treatment than that applied to the majors.

Legislative Initiatives

Concern over royalty owners with small holdings carried over into the 97th Congress. Deliberations in the Spring and Summer of 1981 over general tax reduction facilitated renewed attention to the WPT. This time, however, more than royalty owners' concerns were being considered.

To address these several concerns, about 20 bills were introduced in the 97th Congress that would completely or partially exempt royalty owners and/or independent producers from the windfall profit tax. At least one other bill would have eased the impact of the WPT by increasing or extending in time the tax credit granted royalty owners by the Omnibus Act. Since many bills addressed more than one issue, it is difficult to classify them.

By far the most common method of partly exempting categories of oil producers or of royalty owners proposed was the establishment of an average daily volume of production below which oil would not be subject to the WPT; the level most frequently proposed was 1,000 barrels per day. One of the House bills that used the 1,000 barrel level--H.R. 2451, introduced by Rep. Hance (Texas)--had 212 co-sponsors. The effect on average royalty owners of a 1,000-barrel-per-day exemption would be to fully exempt them from the windfall profit tax, inasmuch as few, if any, own an interest in production approaching 1,000 barrels per day.

The tax-credit approach was incorporated in the income tax proposals advocated by the Reagan Administration early in 1981: a yearly credit against income taxes (or refund of income taxes) of up to $2,500 for windfall profit tax payments (this would replace and extend the $1,000 credit provided for 1980 by that year's Omnibus Act). The Senate Finance Committee approved the $2,500 credit as part of the tax reduction bill. The House Ways and Means Committee approved the same dollar amount of credit, but only for calendar year 1981. However, the Ways and Means Committee also would have exempted royalty owners from the WPT on their first barrel per day or oil production in 1982 through 1984, on two barrels per day in 1985. and 3.5 barrels per day in 1986.

Several bills were introduced that would have reduced windfall profit tax incurred by owners and operators of stripper wells specifically. In addition, a number of bills would have aided stripper producers under measures principally aimed at assisting larger producers. The House Ways and Means Committee recommended that all producers' first 100 barrels per day of Tier 1 and Tier 2 oil be exempt.

Deliberations over the tax bill in the 97th Congress also involved proposals to more broadly reduce the WPT, with most attention focusing on Tier 3--mainly "newly-discovered' oil (discovered after December 31, 1978). The Senate Finance Committee reported out, among other tax items, a reduction in the WPT on Tier 3 from the then-present 30 percent to 25 percent in 1983 and 1984, 20 percent in 1985, and 15 percent in 1986 and thereafter (Report on H.J. Res. 266, July 6, 1981).

In the House, the Ways and Means Committee adopted the recommendation that all producers be exempt from the windfall profit tax on their first 500 barrels per day of Tier 3 oil effective January 1, 1982. In addition, producers would be exempt from the WPT on their first 100 barrels per day of Tier 1 and Tier 2 oil (combined) in 1982 through 1984, on their first 200 barrels per day in 1985, and on 350 barrels in 1986. The aggregate amount of oil that would be exempt under this provision and that relating to Tier 3 would be 500 barrels per day.

Economic Recovery Tax Act of 1981: Congress incorporated the essence of the above proposals to ease the windfall profit tax in the overall tax legislation enacted August 13, 1981, as the Economic Recovery Tax Act of 1981 (ERTA). This major tax measure (P.L. 97-34) perhaps is best known for its reduction in personal income tax rates and its substantital liberalization of depreciation allowances for business plant and equipment. ERTA's major changes with regard to the windfall profit tax are summarized below:

*The royalty owner tax credit was made available for calendar year 1981 and increased from $1.000 to 2,500. For 1982 through 1984, royalty owners' first two barrels per day of production were exempted from the tax, and their first three barrels per day were exempted for 1985 and thereafter.

*Stripper well production by independent producers was exempted from the tax starting in 1983. The exemption does not reduce the amount of oil eligible for the lower tax rates afforded independent producers. Stripper oil cannot qualify for the exemption if it is produced from a property that has been owned on or after July 23, 1981 by a nonindependent producer.

*The tax rate on newly discovered oil was reduced from 30 to 15 percent over five years as follows: 1982, 27.5 percent; 1983, 25.0 percent; 1984, 22.5 percent; 1985, 20.0 percent; 1986 and thereafter, 15.0 percent.

The Tax Equity and Fiscal Responsibility Act of 1982: By early 1982, Congress' mood changed from tax cutting to tax raising. Large Federal budget deficits began to be projected for the current and future fiscal years, and the perceived need for large amounts of revenue focused Congressional attention on possible sources.

Toward this end, a large number and wide variety of bills were proposed that aimed at increasing revenues while closing "loopholes" and improving taxpayer compliance. At least part of many bills provided for a tightening of the application of the windfall profit tax, including some that would have rescinded some cuts in the WPT provided by ERTA. The more widely discussed energy tax proposals will be covered in the next section under "Other Energy Taxes and Fees."

H.R. 4961, a multifaceted bill introduced by Rep. Stark (California), became the major markup vehicle for raising revenue. This measure, titled the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA, P.L. 97-248), ultimately contained only one substantial change in the windfall profit tax. One of its provisions that eventually became law tightened the application of the WPT on oil shipped through the Trans Alaska Pipeline System (TAPS). More specifically, this Act repealed (effective January 1, 1983) the upward adjustment in the base price of Sadlerochit oil that was permitted (by the 1980 Windfall Profit Tax Act) when the TAPS tariff fell below $6.26 per barrel. The repealed adjustment tended to reduce the amount of windfall profit tax payable by Alaskan North Slope producers. TEFRA was signed into law on September 3, 1982.

The Technical Corrections Act of 1982: With the passage of time after the imposition of the windfall profit tax, a variety of glitches in the rules and definitions relating to the WPT began to be perceived, in addition to the objections to the tax per se (some of the problems related to the original Windfall Tax Act and some to ERTA). Therefore, at about the same time that proposals for increasing revenue were being considered, bills that included provisions to fix the "technical" problems (with minimal effects on revenue) began to come forward.

The following were among the suggested changes: (a) allow beneficiaries of trusts to benefit to some extent from the partial exemption granted royalty owners by ERTA, (b) modify the definition of an independent producer so as to not disqualify companies that sell aviation fuel in bulk to the Defense Department, (c) modify the definition of exempt stripper well oil so as not to permanently make ineligible for exemption oil production by companies that temporarily do not qualify as independent producers, (d) clarify that production from a qualified tertiary recovery project is not entitled to Tier 3 treatment (the lowest tax rate) unless injection of the specified tertiary substances began after May 1979, and (e) clarify that oil from an economic interest held by the United States in a Naval Petroleum Reserve is Tier 2 oil (the original Act had mistakenly it as a National Petroleum Reserve). 1/

H.R. 6056, introduced by Rep. Rostenkowski (Illinois) in early April of 1982, became the markup vehicle. Several of the proposed fixes survived the legislative battles, and were included in the Technical Corrections Act of 1982 when it passed Congress at the close of the 2nd session. The Act (P.L. 97-448), which made technical corrections related to the Installment Sales Revision Act of 1980 as well as to ERTA and the 1980 Windfall Profit Tax Act, was signed by President Reagan on January 12, 1983. The more important "technical corrections" of windfall profit tax law are summarized below:

* Following "a" above, each qualified beneficiary of a trust that has qualified royalty production will be entitled to a refund of windfall profit tax paid on his or her allocable share of that production. This, of course, is subject to the limit of two barrels per day in 1983 and 1984, and three barrels per day after 1984. Allocable trust production

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1/ For the purpose of brevity, the inclusion of these particular modifications was made partly on the basis of ease of explanation. The explanations themselves are simplified.

is allocated among the trust and its beneficiaries according to each person's interest in total trust qualified royalty production.

- Following "d" above, injefctions of specified substances for tertiary recovery must have begun after May 1979 for resulting production to qualify for Tier-3 treatment.
- Following "e" above, production from an economic interest held by the U.S. in a Naval Petroleum Reserve qualifies as Tier 2.
- Determination for windfall profit tax purposes of whether a producer is a retailer or refiner--and, therefore, not an independent producer--is to be made on a calendar-year basis.
- The definition of exempt Alaskan oil is clarified to include (1) all oil, other than Salderochit oil, produced from a well located north of the Arctic Circle from a reservoir from which commercial quantities of oil have been produced through such a well, or (2) from a well located north of the divides of the Alaska and Aleutian ranges and at least 75 miles from the nearest point on the Trans Alaska Pipeline System.

Prospects and Pending Issues

As the 98th Congress commenced, many oil-producing interests continued to inform their Representatives and Senators of their objections to the (now modified) windfall profit tax. Prospects are that at least several bills that would repeal the tax or reduce its impact will have been introduced by the end of the 1st session. However, pressure on Congress to at least prevent a widening of the large current and prospective Federal budget deficits makes it unlikely that most Members will propose, or vote for, the giving up of a substantial source of revenue.

OTHER ENERGY TAXES AND FEES

Background

As indicated in the section on the windfall profit tax, large Federal budget deficits began to loom by late 1981, and Congress' focus shifted from tax cutting to revenue raising. The Congressional Budget Office projected deficits of $109 billion, $157 billion, and $188 billion for Fiscal Years 1982, 1983, and 1984. 2/ energy, particularly oil, was viewed by many as a promising area to generate tax revenues.

Most proposals for taxes or fees on energy during the previous nine years were advanced in very tight markets with increasing consumption and prices. The relative powers of the President and of Congress to tax were important issues in the defeat of the oil-import tax imposed by President Carter in 1980, which was struck down by Congress and a Federal District Court. At least equally important was the Congressional resistance to adding the proposed 10 cents per gallon to the cost of gasoline when gasoline prices had just risen sharply.

Since the late 1970s, however, crude oil production capacity of the United Kingdom and Mexico have expanded significantly, and petroleum consumption by Japan and most industrialized Western countries have decreased. Therefore, in contrast with the situation less than a year before, revenue raising proposals in early 1982 originated in a context of a soft petroleum market with declining consumption and prices.

Legislative Initiatives

A variety of proposals for new taxes and increase in old taxes were explored by the 98th Congress in its search for revenues. Some that had been advanced in other situations for other purposes were now considered primarily for their revenue-producing abilities.

Oil-import fee: Proposals to impose a fee or tax on imports of petroleum probably attracted the most attention, if not favor, early in the 2nd session. Almost without exception, the proposals called for a fee of a certain dollar amount per barrel on both crude oil and refined product (a fee levied on only crude or only products may

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2/ U.S. Congress. Congressional Budget Office. Baseline Budget Projections for Fiscal Years 1983-1987, A Report to the Senate and House Committee on the Budget--Part II. Washington, U.S. Govt. Print. Off., 1982. p. xix.

result in evasion by importing the commodity in the form not subject to the fee). It should be noted that a government charge per barrel levied on imports of a commodity would have the same economic effect whether designated a "fee," "tax," or "tariff."

Proponents of an oil import fee claimed it would yield significant revenues, reduce the level of petroleum imports, maintain incentives for domestic oil production and development of alternative energy sources, and maintain incentives for energy conservation, including the pruchase of energy-efficient machinery and equipment. Lower oil prices were seen as an opportunity to lessen the apparent price effect of an oil-import tax. Opponents said that an oil-import tax would add to inflation or offset the recent decline in petroleum prices, retard economic recovery by increasing the costs of living and of doing business, impose a disproportionate hardship on low-income families while increasing oil company profits, and reduce the international competitiveness of U.S. industry.

It was clear to most informed observers that domestic petroleum prices would rise to the higher level of oil imports, probably resulting from an oil-import fee. This consequence would lead to greater revenues from the windfall profit tax and from business income taxes paid by oil producers. It was approximated that an oil-import fee would be expected to yield nearly $1.5 billion per year for each dollar of tax imposed per barrel of imported petroleum.

Attention to oil-import fees was most intense in the first half of 1982. Reflecting this, several analyses of the revenue and economic effects of an oil-import fee had been produced by Congressional and Executive agencies by early Spring. 3/ Interest groups in other sectors had

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3/ For example: U.S. Congress. Congressional Budget Office. Oil Import Tariffs: Alternative Scenarios and Their Effects. Staff Working Paper. April 1982. 17 p.

U.S. Library of Congress. Congressional Research Service. Revenue and Macroeconomic Effects of an Oil Import Tax: A Brief Review. [by] Larry Kumins. April 7, 1982 19 p.

U.S. Library of Congress. Congressional Research Service. Background on Oil Import Fee Proposals: Some Policy and Economic Considerations. [by] Larry Kumins. April 7, 1982. 11 p.

U.S. Department of Energy. Memorandum, "Economic Impacts of an Oil Import Tax." Arthur T. Andersen and William P. Curtis, to J. Erich Evered. March 19, 1982. 6 p.

issued reports discussing the effects of an import fee. 4/

By and large, the Federal agency analyses found that (a) domestic consumption and importation of oil would decrease slightly, (b) assuming oil producers do not absorb all of the fee, the general price level would tend to be higher than otherwise, (c) the price effects would tend to reduce economic activity and employment (at least in the short run), and (d) net Federal revenues resulting from the imposition of a fee would tend to be less than one would initially expect--as reduced economic activity would tend to lower general tax revenues, and higher price would increase Federal outlays.

Strong and diverse opposition to an oil-import fee arose in Congress soon after initial reports circulated that such a fee was being considered. Before the end of April, three resolutions were introduced in the House (one with 106 co-sponsors), and two in the Senate (one with 18 co-sponsors) expressing the sense of the respective bodies that the President and/or Congress should not impose an import fee (H. Res. 314, H. Res. 349, H. Res. 430, S. Res. 261, and S. Res. 369).

General oil excise tax: Proposals for an excise tax that would cover domestic oil as well as imports surfaced, in the context of reducing the budget deficit, around the same time as those for an import tax, but received less attention. A petroleum excise tax could be structured to yield the same amount of revenue as an import fee and would have some of the same economic effects. For example, both an oil-import tax and a petroleum excise tax would, in the short run, tend to widen the price difference between oil and natural gas and the difference in tax policy applied to the respective fuel. 5/ Eventually, economic forces would tend to narrow the disparity. Also, imposition of a tax on this one energy

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4/ For example: Petroleum Industry Research Foundation, Inc. The Oil Import Fee Issue. New York. April 19, 1982.

American Gas Association. Energy Analysis - "A Comparison of the Direct Effects of an Oil Import Fee vs. a General Energy Tax." June 18, 1982.

5/ For a discussion of this point, see p. 10-11 of Kumins, Background on Oil Import Fee Proposals: Some Policy and Economic Considerations.

source would bear disproportionately on energy users in those geographic regions where oil is heavily used. One of the respects in which a general petroleum excise tax would differ in effect from a import fee is that domestic oil producers would not benefit from a price rise, and that stimulus to domestic oil production would be absent.

BTU tax: Strong opposition to oil tax proposals led to examination of other kinds of energy taxes. The most widely considered was a so-called BTU tax. A BTU tax would be a broadly imposed excise tax, affecting "all" energy forms and levied according to the energy content of the energy source. What was meant by "all" energy varied among the proponents of the idea. In nearly every case, it included both domestic and imported oil and all marketed natural gas (including imports). There was far less agreement as to whether or not coal, electricity, nuclear power, and hydropower should be taxed. Moreover, as noted by a CRS analysis, every energy source has special characteristics or circumstances associated with its production and use that make it difficult to structure a BTU tax equitably among fuels and to reflect national energy policy goals as well. 6/ A BTU tax appears to be less disruptive than an import fee, per dollar of revenue produced, in terms of the resulting increase in the general price level and decreases in economic activity and employment. The CRS report contains quantitative estimates of the difference. 7/

Other energy taxes: By mid-Summer 1982, hearings on the proposed energy taxes had been held by each chamber, and the means of taxing energy use that were reviewed by Members or Committees also included an ad

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6/ U.S. Congress. Congressional Research Service. Policy and Macroeconomic Aspects of a BTU Tax. [by] Everson Hull & Lawrence Kumins. May 3, 1982. p. 2-9.

7/ Policy and Macroeeconomic Aspects of a BTU Tax. p. 10-18.

valorem (rather than a BTU) tax on all major energy sources, and (an increase in) the motor fuels taxes. 8/

Also by mid-summer, interest in energy use as a source of revenue appeared to have abated. While the Tax Equity and Fiscal Responsibility Act, passed in mid-August, raised various taxes by a total of $98 billion over FY 1983-1985, it did not include any of the propoased energy taxes. Although the legislative proposals were put forward because of the revenue power of the respective taxes, issues related to other aspects and consequences inevitably were raised and proved to be decisive in preventing passage.

Only one bill to enact any of the forementioned tax proposals was ever introduced. Based on a search CRS' legislative data base, only S. 1707, introduced on October 6, 1981, by Sen. Hart (Colorado), constituted a formal proposal to levy one of the energy taxes mentioned above, except for bills relating to the motor fuels taxes. S. 1707 would have imposed a tax on imported crude oil and refined petroleum products; the revenue would have been put into the Social Security Trust Fund and used to expand energy assistance to low-income families.

8/ Congressional Committee documents that contain staff analyses and/or testimony of witnesses regarding the several proposed energy taxes include -

U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Fossil and Synthetic Fuels. Implications of proposed energy taxes. Hearing, 97th Congress, 2nd Session. June 15, 1982. Washington, U.S. Govt. Print. Off., 1982. 290 p.

U.S. Congress. Joint Committee on Taxation. Description of possible options to increase revenues; prepared for the Committee on Finance, U.S. Senate, by the staff of the Joint Committee on Taxation with the staff of the Committee on Finance. Washington, U.S. Govt. Print. Off., 1982. 134 p.

U.S. Congress. Joint Committee on Taxation. Description of possible options to increase revenues. Prepared for the Committee on Ways and Means, U.S. House of Representatives by the staff of the Joint Committee on Taxation with the staff of the Committee on Ways and Means. Washington, U.S. Govt. Print. Off., 1982. 233p.

U.S. Congress. Senate. Committee on Finance. Subcommittee on Agricultural Taxation. Energy tax options. Hearing, 97th Congress, 2nd Session. June 9, 1982. Washington, U.S. Govt. Print Off., 1982. 286 p.

Nearly all the other energy tax proposals either were made "informally" (not formally introduced) or originated outside of Congess, 9/ suggesting a widespread reluctance among Members to put themselves on record as favoring one of these taxes. In retrospect, the "inevitable" result described above was hinted at by the virtual absence of actual bills. Debate over the proposals was notable in that it occupied much of Congress' time in the first half of 1982 without even one measure actually being introduced in the House of Representatives.

Surface Transportation Assistance Act of 1982: Federal excise taxes on motor fuels have existed since 1932. Revenues derives from these taxes are deposited in the Highway Trust Fund and used almost entirely to construct and repair roads and bridges in the Federal-aid highway system. This is the basis for calling these taxes "user fees." Since 1959, the taxes on both gasoline and diesel fuel had been set at four cents per gallon. Because petroleum prices had increased considerably since then, the proportion of the final retail price of gasoline accounted for by the tax had shrunk from 13 percent to 3 percent.

Proposals to increase the price of motor fuel through boosts in the Federal excise taxes or other means had been common since the 1973-1974 Arab oil embargo and subsequent rise in crude oil prices. Such proposals were largely intended to reduce U.S. petroleum consumption and, thereby, oil imports. As noted above, proposals in early 1982 to increase the Federal motor fuel excise taxes were put forward mainly for the purpose of raising general - revenues in order to reduce the budget deficit.

The fall of 1982 saw a major push to increase the Federal motor fuel excise taxes that appeared to be motivated mainly by a desire to reverse widespread deterioration in the Nation's transportation "infrastructure," to expand mass transit facilities, and to create jobs for unemployed workers in construction and related industries (during the then-current economic recession, unemployment among construction workers was extremely high). To some extent, the particular timing resulted from the circumstances of declining gasoline and diesel fuel prices, which presumably would cushion any price boosts caused by a tax increase.

9/ For example: "Reagan Considering Oil Import Fee." Daily Executive Report, Tax Notes. Bureau of National Affairs, Inc. January 7, 1982. p. G-3

Consideration of the idea to raise motor fuel taxes to boost spending on highways and mass transit became very intense during the post-election session. Some observers trace the late 1982 push to a suggestion by then-Secretary of Transportation Lewis in late 1981. The "final" Transportation Department proposal to Congress included a restructuring of the excise taxes on trucks and tires. Bills that contained the various proposals attracted many embellishments and non related amendments. H.R. 7319, introduced by Rep. Sabo (Minnesota), and H.R. 7368 (Rostenkowski, Illinois) were among the major bills introduced in the House of Representatives in late November. In the Senate, Sen. Baker (Tennessee) introduced S. 3044.

The amount of tax increase most frequently proposed was five cents per gallon, which would have boosted the proportion of the final retail price accounted for by the tax to about seven percent. Revenues resulting from such an increase were estimated at $5.5 billion per year.

A bill that had been introduced by Rep. G. Anderson (California) in April of 1982 (H.R. 6211) became the markup vehicle in the House. This omnibus transportation bill called for, among other things, an increase in the excise taxes on gasoline and diesel fuel to nine cents per gallon (to be used for highway rejuvenation and safety and for mass-transit facility construction).

After numerous amendments, the House passed H.R. 6211, now called the Surfact Transportation Assistance Act of 1982, on December 6, 1982. The resulting measure increased the motor-fuel excise taxes by five cents effective April 1, 1983, restructured truck and tire excise taxes in a way that heavier trucks would bear a greater burden than before, did not extend the tax exemption for gasohol to the five cent increase, and had numerous other provisions related to the extension and expansion of coverage of the Highway Trust Fund.

The Senate Finance Committee reported a bill on December 8, 1982, that also would increase the motor fuel taxes by five cents on April 1, but had less of a re-orientation of truck taxes toward the heavier vehicles, and granted gasohol an exemption for the full nine cents per gallon. After lengthy debate on the floor, the Senate passed its measure on December 20, and adopted the conference committee report on December 23. President Reagan signed the measure into law on January 6, 1983 as P.L.-474.

The statute increases the motor fuel excise taxes to nine cents per gallon effective April 1, 1983, sets the exemption for gashol at a total of five cents cents per gallon, and somewhat reorients truck taxes toward heavier vehicles.

Prospects and Pending Issues

Although energy use received considerable attention as a possible source of revenue to narrow impending large budget deficits, the only substantial change in energy taxes enacted by the 97th Congress was the boost in the motor-fuels excise taxes. Moreover, that measure was intended as a jobs-creating public works bill rather than as a revenue-raiser. 10/

Thus, with budget deficits projected to increase further over the next several years, the problem of trying to raise substantial amounts of revenues (along with cutting outlays) is passed on to the 98th Congress. It is likely that, again, energy taxes will be eyed as revenue sources, but the target has become less financially and politically attractive as a result of declines in petroleum prices and in oil company profits.

10/ As noted earlier, the jobs-creating aspect of the measure was focused on the construction and related industries.

Emergency Planning*

BACKGROUND

The 97th Congress witnessed, and was to some extent an unwilling architect of, a broad reversal in energy emergency policy and philosophy. Congress was faced with the impending expiration of legislative authorities that had provided the framework for petroleum price and allocation controls in the 1970s, and a standby gasoline rationing authority. 1/

For most of the 1970s, preparedness policy was designed to insulate the economy as a whole, and the low-income population in particular, from the drastic price increases that accompanied the embargo in 1973 and the shortages of 1979. It was assumed that the Federal Government should play a preeminent part in emergency preparedness policy and should intervene in the market place, allocating petroleum products and setting their prices. There was general optimism that the Federal Government could effectively mitigate the economic and social dislocations that would accompany shortages.

These perceptions changed in the early 1980s, for reasons that were partly philosophical and partly the result of the events of the previous years. Also fresh in the collective mind of the 97th Congress were the struggles of the 96th Congress to fashion consensus on one aspect of energy emergency policy: the standby gasoline rationing plan. By the time the effort was over, numerous supporters of emergency planning had lost confidence in the ability of public policy to achieve equity in crises that would impinge so deeply on so many individuals and sectors of the economy.

Despite the struggles of the 96th Congress, and the strong consensus in the 97th that controls were an inappropriate response to shortages of the magnitude experienced in the 1970s, the Congress seemed skeptical that an unregulated market was the appropriate primary policy response to shortages of any severity.

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1/ These controls were enacted originally in the Energy Policy and Conservation Act (P.L. 94-163), and amended in subsequent enactments such as the Energy Conservation and Production Act (P.L. 94-385), and notably, the Emergency Energy Conservation Act of 1979 (P.L. 96-159). For a discussion of the debate over rationing, see U.S. Congress Senate Committee on Energy & Natural Resources. Energy Initiations of the 96th Congress.

That, however, was the philosophy championed by the Administration. On February 18, 1981, President Reagan said he opposed spending more Federal money on a standby gasoline rationing plan. 2/ In late July 1981, a DOE report strongly opposed enactment or retention of authorities to impose price and allocation controls. The report, instead, proposed maximum reliance on public and private fuel stocks, and on the free market, during shortages.

A "decentralized flexible response," declared the report, would be better able to deal with uncertainties about the depth and duration of a shortage than a regulatory approach. "No other action," it noted, "could have a more salutary effect on the preparedness and endurance capability of producers and consumers alike than to guarantee that domestic price controls and allocation of oil for civilian purposes will never again be imposed." 3/

Congress, faced with the impending expiration of price and allocation controls, felt compelled to make its own assessment of the question. In the absence of any other affirmative vision, Congress sought initially to retain a standby authority to impose controls, but only as a response to shortages more severe than experienced in the past. Encountering a Presidential veto and strong Administration resolve against any standby domestic control authorities, Congress largely endorsed the Administration's position in the Energy Emergency Preparedness Act of 1981 (EEPA, P.L. 97-229), which began as S. 1503.

LEGISLATION COMPLETED

The First Thrust: The Standby Petroleum Allocation Act (S. 1503, H.R. 4700)

The Senate Energy Committee held hearings in May and June 1981 on the appropriate role of the Federal Government during disruptions in petroleum imports. At issue

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2/ "With these and other regulations gone," the President said of the rationing plan and other DOE regulatory responsibilities, "we can save several hundreds of millions of dollars over the next few years." His address in full appears in: Congressional Quarterly, vol. 39, no. 8. February 21, 1981. p. 360-63.

3/ U.S. Department of Energy, Assistant Secretary for Environmental Protection, Safety, and Emergency Preparedness. DOE/EP-0027. July 1981. p. 16.

was whether or not the President would have adequate authority, after the expiration of EPCA controls, to cope with a major petroleum shortage. Chairman James McClure noted that President Reagan's termination of the oil and price allocation controls had been met "with nearly universal acclaim," but he added that "few would disagree with the notion that we must develop a well-designed, national contingency plan for dealing with a major disruption in oil supplies." 4/ Subsequent to those hearings, the Senator introduced S. 1503, the Standby Petroleum Allocation Act of 1981.

S. 1503 was intended to provide the President with discretionary authorities, subject to Congressional approval, to implement crude or petroleum product allocation regulations in the event of, or imminence of, a severe shortage. Price controls were provided, as well, but only as "necessary to achieve the objectives" of allocation. Its sponsors argued that the bill was quite different from the old system of controls because it was discretionary. Past experience suggested that controls would be invoked only as a last resort, and only during greater shortages than past ones. Once invoked in the past, controls had proven difficult to lift. To address that concern, the regulations would have terminated after 90 days, subject to a one-time 60-day extension, unless the President submitted a new notice of intent to Congress.

Senator McClure, recognizing that there would be little hope for Presidential signature if the bill were "loaded" with mandatory requirements, intended that the bill be kept as simple as possible. The bill, however, was besieged in committee with amendments to define specifically what constituted a severe disruption, and to establish priority uses in the standby regulations. To forestall lengthy and acrimonious debate, the full committee agreed on September 30, 1981 (the very day that the controls expired) to incorporate into the bill, section 4(b)(1) of EPCA. That language stipulated that the regulations would, "to the maximum extent practicable," provide for protection of public health, maintenance of public services, preservation of a sound and competitive petroleum refining and marketing industry, and maintenance of agricultural operations including fishing.

4/ U.S. Congress. Senate Committee on Energy and Natural Resources. Standby Oil Controls. May 19 and June 3, 1981. Publication No. 97-23. p. 2. A useful summary of these hearings is: Bamberger, Robert. Standby Oil Controls: Summary of Testimony before the Senate Energy and Natural Resources Committee. U.S. Library of Congress. Congressional Research Service. June 15, 1981.

The House proposed and debated comparable legislation (H.R. 4700), but there were some significant differences. Rather than specify priority uses, the House bill proposed that the regulations "be consistent" with section 4(b)(1) of EPCA. It also provided independent authority to impose price controls. Although Senator McClure had urged that matters relating to the Strategic Petroleum Reserve be addressed separately, the House bill required the President to submit a new SPR drawdown plan. While the plan was not required to include details concerning when a drawdown would occur, it would provide a detailed discussion of drawdown options. When the conferees met on the legislation in early 1982, the House language was dropped, but the final report on the bill summarized a number of SPR issues and expressed Congressional intent to address them.

Although it drew less attention, the provision of greatest significance in the proposed legislation was one which would have pre-empted State laws and regulations in conflict with a Federal program, if implemented. Even though the conferees did not intend pre-emption of all State regulations, they did intend that ". . . the decision as to when and to what extent to replace market mechanisms with mandatory price and allocation program . . . is a Federal decision, and State laws that would usurp this Federal role are hereby preempted." 5/

The conference report was approved in the Senate on March 2, 1982, with little opposition (86-7), and was approved by the House the following day (246-144). Even before the votes, reports of a veto by the President began to surface. Assistant Energy Secretary for Emergency Preparedness William Vaughn, in a March 2 memorandum, recommended that the President veto the measure, arguing that the legislation would interfere with the "efficient, economic and beneficial" operation of the marketplace. Vaughn

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5/ U.S. Congress. House. Standby Petroleum Allocation Act of 1982. Conference report to accompany S. 1503. H. Rept. No. 97-432. p. 23. The extent and manner by which States could regulate petroleum products moving into interstate commerce during a shortage without violating severe shortage. Price controls were provided, as well, the Constitution remains an unsettled issue. During a shortage, Congress would likely settle the matter swiftly. For a discussion of the legal issues that were raised by the expiration of EPAA, see: Poling, Robert D. Legal Effect of the Expiration of the Emergency Petroleum Allocation Act: Termination of Federal Statutory Preemption of State Law. Congressional Research Service. May 14, 1981. It appears in: U.S. Congress. Senate. Committee on Energy and Natural Resources. Government Responses to Oil Supply Disruptions. July 28, 30, 1981. p. 134-224.

> developing plans. And this explains what DOE is now doing. 7/

In its closing lines, however, the report echoed another facet of the Administration's philosophy of emergency planning--that even in a crisis where the national security and welfare were threatened:

> . . . There may well be no need for Federal governmental involvement in an interventionist and mandatory manner. Over 220 million Americans know how to make America work--the role of the Federal Government is to help them do it when such help is truly needed, and to get out of the way when it is not. 8/

The report probably had little effect on the final vote. It probably served only to confirm opinions or suspicions on either side of the issue. Though the measure had passed overwhelmingly in the Senate, the override failed (58-36, five not voting), largely due to intense lobbying by the President, which swayed those whose conviction on behalf of the measure was not nearly so strong as his conviction against it.

The Second Thrust: The Energy Emergency Preparedness Act of 1982 (P.L. 97-229, S. 2332, H.R. 6337)

Senator McClure had attempted to persuade the White House and his colleagues in Congress that the standby authorities which would have been provided by S. 1503 would not be the millstone that controls had been in the past. Most importantly, because invocation of the controls was to be discretionary and subject to Congressional approval, the bill's sponsors sought to assure the skeptics that controls would not be employed unless a broad consensus deemed them the court of last resort in a critical situation. Still, many accepted the Administration's argument that the mere possibility that controls might be instituted would discourage anticipatory initiatives within the private sector. The failure to override the President's veto was a

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7/ Mr. Broyhill's letter of inquiry and the complete report may be found in: U.S. Congress. Senate. Committee on Energy and Natural Resources. Energy Emergency Preparedness: International and Domestic Issues. Hearing on S. 2332. May 6, 1982. p. 202 et seq. The quotation appears, p. 231-2. The report also appears in the Senate portion of the Congressional Record, March 24, 1982 (S2737 et seq., daily edition).

8/ Ibid., p. 241.

meaningful repudiation of the guiding philosophy that had shaped energy emergency planning in the past.

The Department of Energy asserted that emergency planning was not the solving on paper of hypothetical problems, but the solving of real ones. However, congressional critics of DOE said that they were not persuaded that it would be prepared to solve real problems unless it had given some thought to hypothetical ones. The failure to enact the Standby Petroleum Allocation Act of 1981 was an abandonment of price and allocation controls, but it left unaddressed congressional concern about the breadth and detail of the Administration's emergency planning. In both the House and Senate, legislation governing oil companies' participation in the International Energy Agency (IEA) became a broader legislative vehicle for resolution of this Congressional concern. The Senate passed its measure (S. 2332) on May 26, 1982, by a margin (88-7) not unlike that given S. 1503; a similar House measure (H.R. 6337) was passed overwhelmingly on June 28, 1982 (396-3). The conferees reported a compromise bill the next month which was approved by both House and Senate on July 29 and July 30, respectively. President Reagan signed the bill without fanfare on August 3; it became P.L. 97-229. ber 31, 1983, the EPCA authorization for U.S. oil companies to participate in the IEA International Energy Program. That program provides for international allocation of oil, and not for domestic allocation internal to the United States. The legislation also required a number of reports and studies, pursuant to Congressional concern that the Administration review policy options and report its analysis to the Congress. These reports and studies included:

(1) a memorandum of law to be submitted by November 15, 1982, describing ". . . the nature and extent of the authorities under existing law available to the President for his use in responding to a severe energy supply interruption or other substantial reduction in the amount petroleum products available to the United States." 9/ The memorandum was to also address U.S. Government activities in support of the IEP agreement, use of the Strategic Petroleum Reserve, Government incentives to encourage the building of petroleum stocks in the private sector, and coordination of emergency responses with State and local government. This last focus of the report would address the potential conflicts between State and Federal authorities in the absence of a Federal pre-emption statute

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9/ U.S. Congress. House. Energy Emergency Preparedness. Conference report to accompany S. 2332. H. Rept. 97-663. p. 11.

disallowing State and local laws that would inhibit operation of market pricing and allocation; 10/

(2) a description of the "comprehensive energy emergency response procedures which the President would consider using to implement the authorities described in the memorandum of law." 11/ This report was to be transmitted to Congress not later than December 31, 1982;

(3) a report analyzing the "impact on the U.S. economy and . . . consumers of reliance on the free market to allocate and set prices" for petroleum during shortages. This report is due by August 1983 (within one year of enactment);

(4) a study, due by year-end 1982, assessing the potential for a strategic alcohol fuel reserve which could supplement the Strategic Petroleum Reserve. Subsequent to enactment of P.L. 97-229, Congress approved and the President signed the Surplus Agricultural Commodities Act of 1982 (P.L. 97-358), which would permit the Department of Agriculture to expand the Commodity Credit Corporation (CCC) pilot program to convert surplus grains to ethanol. The legislation was perceived to represent a possible boost toward creation of a Strategic Alcohol Fuels Reserve. The Department of Agriculture indicated that it was awaiting test results from a pilot program of ethanol conversion from surplus grain before determining how it would implement the bill. 12/

The Strategic Petroleum Reserve

A major focus of the Energy Emergency Preparedness Act of 1982 was on the Strategic Petroleum Reserve (SPR). In

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10/ The report of the Senate Energy Committee on S. 2332 noted that DOE appeared confident that the States would be disinclined to implement regulations that had proven to be failures at the Federal level during past supply interruptions. The Administration has suggested that if State laws impeded interstate commerce, the Justice Department would intervene. In its report, Senate Energy expressed its anticipation "that the memorandum of law will describe how intrusive State laws must be before they will be challenged . . ." See: U.S. Congress. Senate. Energy Emergency Preparedness. Report together with additional and minority views to accompany S. 2332. S. Rept. 97-393. p. 22-23.

11/ Conference report, op. cit., p. 11.

12/ Alcohol Week, v. 3, no. 41. October 11, 1982. p. 9.

the absence of a standby system of price and allocation authorities, the SPR emerged as the principal bulwark at the Federal level against supply interruptions.

The SPR program had fallen sharply behind the schedule envisioned when the program was authorized in 1975. On December 31, 1978, the SPR was intended to contain 250 million barrels (MMB), but contained only 69 MMB. When the Iranian Revolution reduced petroleum supply worldwide in 1979, the Carter Administration suspended purchases of oil for the Reserve to reduce the upward pressure on world oil prices. Filling of the Reserve was resumed in September 1980 following enactment of the Energy Security Act (P.L. 96-294), which stipulated a minimum fill rate of 100,000 b/d, subject to available storage capacity and not subject to the exceptions in EPCA allowing suspension of fill if purchases would adversely affect supply and price. Exception to the 100,000 b/d fill was made subject solely to Congressional review. An amendment to FY81 DOE appropriations legislation at the close of the 96th Congress required the Administration to accelerate the fill rate to 300,000 b/d. The language preserved the Administration's prerogative under EPCA to adjust the fill rate below that level, subject to adjustments for cost or other market factors, while preserving the mandated minimum fill enacted in the Energy Security Act. Then, during the First Session of the 97th, the Omnibus Budget Reconciliation Act (P.L. 97-35) amended EPCA to require the President "to immediately seek to undertake" activities necessary "to assure" an average annual fill rate of 300,000 b/d until the Reserve reached 750 MMB.

Concern during the First Session of the 97th focussed upon financing the fill of the Reserve, and devising some means to reduce the direct impact of the fill program on the Federal budget and the deficit. Congress weighed a number of options to finance the fill off-budget, including public capitalization, debt financing, shifting the burden of stockpiling to the private sector, and financing fill through an increase in the gasoline tax. The financing debate was resolved by the Omnibus Reconciliation Act of 1981 (P.L. 97-38), which established an off-budget account funded from general Treasury revenues to finance oil acquisition, and an on-budget account for administration and physical expansion of the Reserve. This action merely removed most of the cost of the Reserve off-budget without reducing the ultimate Federal cost liability for the program. The Department of Interior and Related Agencies Appropriations bill (P.L. 96-100) established the off-budget appropriation to $3.684 billion for filling the Reserve, and $191.4 million on-budget for administering the SPR program.

The Administration's budget request for FY83, and the sustained veto by the President of the Standby Petroleum Allocation Act of 1981, set the stage for the next chapter in the SPR debate during the 97th Congress. The Administration's funding request for fill of the Reserve during FY83 was sharply reduced, to $2.07 billion for the off-budget account, while the on-budget account was increased some $50 million, to $242.1 million, for storage facility development and program operation. In addition, the request included the deferral of $52.9 million for one year to postpone expansion of the Reserve at the Big Hill site. The Administration projected that this would delay completion of a 750 MMB Reserve from 1989 to 1990. If, as the Administration proposed, some development of Phase III expansion were deferred, the implied fill rate over the period 1982-90 would fall between 160,000-170,000 b/d, far less than the Congressional mandate.

The House Committee on Appropriations held a hearing on the proposed deferral in April 1982, and reported out a resolution disapproving the President's request (H. Res. 479). The resolution was passed by the House on July 29, 1982. The Committee estimated that the deferral would increase the ultimate cost of facility development by $95 million and would increase the purchase cost of oil during the last phase of the fill by $30 million.

A related issue was the projected fill rate which the budgeted funds and available capacity would support. With or without the deferral, the projected fill rate was consistent with the Congressional directives enacted through the First Session of the 97th Congress. In May 1982 the Department of Energy estimated that it would have 277 MMB in the SPR by the end of FY82 for an average daily fill rate of 213,000 b/d.

Congress began to weigh the costs and benefits of accelerating fill through the creation of interim or permanent above-ground storage capacity, with attention focused on the acquisition of tankers or the construction of aboveground steel tanks. At issue was whether or not the effect of additional outlays on the budget would be outweighed by the national security advantages of accelerating fill by a few years. Alternatives with higher facilities cost could have lower overall costs, depending upon whether or not one had an optimistic perception of the price path crude oil would likely follow into the late 1980s. The Administration pointed to its record for accelerating the filling of the Reserve and maintained that the declining fill rate in FY82 and subsequent years did not reflect a change in philosophy, but an attachment of greater importance to controlling the budget. 13/

Congress did not agree. The Senate passed a provision requiring the President to immediately undertake a fill rate, subject only to availability of funding, of 300,000 b/d until the Reserve reached 500 million barrels, while authorizing the obligation of up to ten percent of the off-budget account for securing interim storage facilities. The Administration sought to have the bill amended on the Senate floor to establish the minimum fill rate at 208,000 b/d, but the amendment was defeated, 44-51.

In the House, H.R. 6337 was reported from the Committee on Energy and Commerce with language to require a minimum fill rate of 200,000 b/d, a rate agreeable to the Administration. An amendment introduced on the House floor to provide for construction of 140 MMB in above-ground storage tanks defeated, 282-110.

The conferees reached a compromise that preserved the urgency of the Senate proposal, while affording some latitude to the Administration. The final bill established a minimum fill rate of 300,000 b/d, subject to a finding by the President that maintaining that rate of fill was "not in the national interest." In the event of such a finding, which must be made each fiscal year, the minimum fill rate shall be 220,000 b/d. In addition, if appropriated funds in a given fiscal year will support a rate higher than 220,000 b/d when that rate is in effect, then the rate of fill must be as high as appropriated funds will permit. The bill also establishes clear authority to permit DOE to lease interim storage capacity so that the minimum fill

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13/ See, in particular, testimony of Assistant Secretary Vaughn in: U.S. Congress. Senate. Energy Emergency Preparedness: International and Domestic Issues. Hearing on S. 2332. May 6, 1982. p. 88-91. Mr. Vaughn, upon cross-examination, expressed his sympathy with the position that the costs of financing interim storage could be supported from the savings in oil acquisition costs from acceleration of fill. However, he said, "I fully appreciate the budget-balancing decision of my superiors . . . They have to look at other considerations . . . There is no question that [the decision not to acquire interim storage] is budgetary." (89) For cost estimates of interim storage, see testimony in: U.S. Congress. Senate. Committee on Governmental Affairs. Subcommittee on Energy, Nuclear Proliferation, and Government Processes. Energy Resiliency. May 21, 1982. Also: Alvin Kaufman, Robert L. Bamberger, Alva M. Bowen, Jr., and Karen K. Nelson. U.S. Library of Congress. Congressional Research Service. The Feasibility of Using Tankers as Interim Strategic Petroleum Storage. June 8, 1982.

rate can be maintained while adequate permanent storage capacity is being developed.

The final version of S. 2332 did require the Administration to submit a new SPR drawdown plan. The Administration has not articulated how it would utilize the SPR in an emergency--whether SPR oil would be held to be used only in the severest of shortages or utilized to stem the uncertainty that accompanied the relatively modest shortfalls of 1973-74 and 1979. Establishing in advance the conditions and mechanisms for distribution of SPR crude, the Administration had argued, would discourage preparedness efforts within the private sector and limit the flexibility of the Administration to fashion specific responses to specific shortages. The requirements of the legislation were sensitive to the Administration's position without wholly compromising congressional prerogatives. The legislation limited the scope of the drawdown plan to describing the drawdown strategies that the Administration would consider during a shortage, in the absence of a system of price and allocation controls. The bill did not require that the Administration specify precisely the circumstances under which the Reserve would be tapped because if it had, the Administration would have continued to furiously resist. 14/

LEGISLATIVE INITIATIVES

Other congressional initiatives introduced in the 97th Congress to address energy emergencies did not radically depart from past practice or were a return to ideas that had had attention previously. One proposal, introduced in the 96th Congress by Senator Bennett Johnston (S. 2570), was reintroduced as S. 824, the Emergency Motor Fuel Demand Rationing Act of 1981. It would have authorized the President to impose a tax or user fee on gasoline intended to capture the difference between the price of gasoline at the onset of the emergency and the estimated market-clearing price during the anticipated shortage. The thought was that imposition of a fee would discourage motorists from hoarding supply, and would prevent refiners and retailers from realizing windfall profits. It was intended that proceeds of the fee would be returned to the public as quickly

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14/ The drawdown plan, required to be submitted by December 1, 1982, indicated that the Administration would sell SPR oil by auction. The Secretary of Energy was authorized to withhold 10 percent of the monthly supply to be allocated to severely affected parts of the economy. The allocated supplies would be sold at an average of the monthly auction price. See: U.S. Dept. of Energy. Strategic Petroleum Reserve Drawdown and Distribution Report. December 1, 1982. DOE/EP-0074.

as possible in the form of reduced withholding payments or as increased welfare or social security benefits.

Whether or not a practical mechanism for returning revenues could have been developed was an uncertainty. This same problem plagued another initiative, S. 1354 (the Emergency Preparedness Act of 1981), offered by Senator William Bradley. It, too, reflected disenchantment with conventional price and allocation controls but proposed allowing the market to price and allocate supply in an emergency. However, Senator Bradley's bill, like S. 824, was designed to preserve one function of controls: to protect consumers, at least to some extent, from higher prices. S. 1354 proposed to do so by allowing the President to adjust and to redistribute windfall profits tax revenues.

By permitting price to move with the market, S. 1354 sidestepped the cumbersome difficulties associated with establishing and implementing an emergency gasoline tax. The return of revenues to the economy in these or any proposal, however, could be fraught with the same kind of problems encountered with the old system of price and allocation controls.

Just as the proposed standby gasoline rationing plan established priorities which were hotly argued, it would probably be equally difficult to achieve consensus over any proposed revenue redistribution plan. To whom should supplemental benefits go? Further, at some time, the emergency would have to be declared at an end, even though the free-market price of petroleum products after the emergency would likely be higher than before. The same temptation to continue to protect consumers from higher prices that led to the retention of price and allocation controls could likely lead to retention of a "rebate" and to sustained subsidization of energy consumption.

Mr. Bradley's bill also proposed a study to weigh whether the use of SPR supplies at the onset of an emergency might obviate any possible need for controls and have a moderating effect on prices. Witnesses before congressional committees had argued that a lack of confidence upon the part of refiners had contributed to price increases out of proportion with the modest physical severity of earlier shortages.

Two other proposals also addressed this subject. The State Set-Aside Act of 1981 (S. 445), introduced by Senator Mitchell, would have retained a State set-aside program requiring prime suppliers to reserve 3-5 percent of monthly volume. States could participate in the program at their own discretion.

One bill attempted to capture something of every proposal. The Petroleum Disruption Management Act of 1981 (S. 1476), introduced by Senators Durenberger and Andrews, proposed a series of graduated responses. These ranged from incentives to encourage anticipatory private stockbuilding to the imposition of price controls during the severest shortages. The legislation even included language to provide for imposition of gasoline rationing.

PROSPECTS AND PENDING ISSUES

The enactment of the Energy Emergency Preparedness Act of 1981 brought to a close a difficult struggle. As the emergency planning debate unfolded during the years after the Arab oil embargo, a good many policymakers underwent painful disillusionment and a revision of expectations concerning the potential for pubilc policy to soften the dislocation and price increases which accompanied petroleum product shortages.

The failure to override the President's veto of S. 1503, and the subsequent enactment of S. 2332, was a clear victory for a philosophy that intervention in the marketplace during shortages exacerbates the consequences of shortage. Even among supporters of S. 1503, there was nearly universal agreement that controls had been ineffective for shortages of the magnitude experienced in 1973-74 and 1979. The intention of that legislation was to preserve comparable authorities, should they be needed in more serious shortages. The perspective which prevailed, however, was that even the remotest hint that controls might be used again was a disincentive to preparedness in the private sector.

However adamant the Administration is, with respect to controls, it is almost certain that during a shortage there would be pressure to institute a tax rebate or income redistribution plan that would be sufficient to offset higher energy prices. The Administration has been studying revenue recycling schemes, but it is unlikely that the particulars of such a plan, or any other contingency plan for that matter, will be made highly visible without congressional pressure.

In the absence of a supply emergency or a strong threat of one, it is likely that the focus of the 98th Congress on emergency planning will be restricted to oversight, the intensity of which may be determined in part by the thoroughness of the Administration response to the statutory requirements of P.L. 97-229, particularly with respect to the Strategic Petroleum Reserve, and the emergency planning budget. Should international markets and the politics of producer nations remain relatively stable, it will doubtless be a welcome relief to both the Administration and the 98th Congress not to have to wrestle with the issue, at least for the time being.

Natural Gas Deregulation*

BACKGROUND

The Natural Gas Policy Act of 1978 (NGPA) was enacted as one of five major energy bills which made up the National Energy Act, but it was unquestionably the most controversial and most difficult to enact. That was because the NGPA attempted to end a debate that had gone on for 25 years: Should the Federal Government regulate the prices at which natural gas producers sell gas to interstate natural gas pipelines?

The Natural Gas Act of 1938 (15 U.S.C. 717) (NGA) ordered the Federal Power Commission (FPC) to regulate the sale of natural gas in interstate commerce for resale. Until 1954, the Federal Power Commission, now called the Federal Energy Regulatory Commission (FERC), regulated only the interstate natural gas pipeline companies that purchased and carried gas from the producing companies, most of which were primarily oil companies, for sale to the distributing gas utilities that were subject to regulations by State utility commissions. In that year, however, the Supreme Court decided, in Phillips Petroleum Corp. v. Wisconsin (347 U.S. 672), that sales by natural gas producers to pipelines were "sales for resale" within the meaning of the Natural Gas Act, and that producers' sales should be regulated by the FPC.

The FPC attempted to carry out this mandate first on a company-by-company basis in traditional utility fashion, and then by setting ceiling prices for sales in designated producing regions based on average costs of production. After a severe shortage of natural gas in the early 1970s, however, the FPC attempted to set much higher incentive prices on a nationwide basis during the 1970s, but growth of intrastate markets and fall-off in new gas discoveries perpetuated the shortage. The FPC was fought in court both by consumer interests opposed to the escalating prices that resulted and by the producers, who thought the prices were too low.

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Proposals to modify or end producer regulations for natural gas sales had been made in every Congress since such regulation was imposed by the 1954 Supreme Court decision, but the healthy growth of the natural gas industry kept the issue from the front burners. With the start of the natural gas shortage, however, this changed. In the 92d, 93d, and 94th Congresses, major debates took place, but no basic statutory reform was enacted. The debates were passionate as producer interests and consumer interests championed their concepts of fairness and economic necessity, and conflicting legislation was adopted in the Senate and House without success in compromising the differences.

The Provisions of the Natural Gas Policy Act of 1978

As passed, the NGPA was an extremely complex law, one which completely changed the FERC's previous regulatory system for pricing natural gas at the wellhead.

Title I of the NGPA included the wellhead pricing provisions. Numerous categories of natural gas production were defined in Subtitle A, and there was some dispute about how many categories had actually been created. Their prices were set in the statute, and increased according to different formulas reflecting escalator and inflation factors. Subtitle B provides that regulation for some, but not all, categories would end on Jan. 1, 1985, subject to being reimposed at the discretion of Congress after a period of six months for a period of as long as eighteen months. The major categories of natural gas created, by the numbers of the sections of the NGPA which created them, were: (1) new natural gas, (2) new onshore production wells, (3) flowing interstate and intrastate gas, (4) other natural gas under contract, (5) rollover gas or gas resold to the same purchaser upon expiration of the earlier contract, (6) high-cost gas, (7) stripper-well gas, and (8) all other categories, and specifically Alaskan gas from the Prudhoe Bay Unit.

Title II of the NGPA established the incremental pricing provisions, requiring the FERC to apply incremental pricing to industrial boiler fuel facilities served directly or indirectly by interstate pipelines within one year, and to expand that rule to apply to other industrial applications by six months later. The FERC was given much leeway in implementing incremental pricing in order to achieve the statutory objective: the maximum allocation of the higher cost of new and high-cost natural gas sold in interstate commerce to industrial customers without causing industrial customers to switch from natural gas to other fuels.

Title III of the NGPA created permanent authorities similar to the temporary emergency authorities of the Emergency Natural Gas Act passed in January 1977, allowing the President to declare a gas supply emergency, allocate gas among pipelines, and from others who volunteer, to areas of shortage. Title IV granted agricultural users of natural gas a higher priority during curtailments than any but residential, small commercial, and other critical users. Title V presented the administrative mechanism to be used by FERC in regulation, primarily reviewing State agency determinations of the category a given well falls in, and provides standards for court review of the NGPA. Title VI coordinates the NGPA with the Natural Gas Act of 1938, the prior statutory basis for gas regulation, much of which applied to pipeline operations, accounting, and other aspects of the gas industry which were not affected by the NGPA.

Post-Enactment Developments

Almost immediately following its enactment, the NGPA became the object of considerable controversy over its provision for incremental pricing (Title II). It was, however, largely resolved in the 96th Congress.1/ Incremental pricing allocates high-priced gas to industrial consumers up to the point that they pay the equivalent of oil fuel prices. NGPA originally envisioned boiler-fuel users being initially targeted for prices increases up to the equivalent of relatively cheap high-sulfur heavy fuel oil. Subsequently, under Phase II, more industrial users would be covered, and their prices would rise to parity with relatively expensive middle distillate.

Phase I of incremental pricing, affecting boiler-fuel users of more than 300 Mcf per day, became effective Nov. 1, 1979. Phase II, affecting small industrial users to the extent necessary to cover 95 percent of industrial gas use, was to become effective six months later. A great deal of concern was expressed by industrial users and others that incremental pricing would lead to higher industrial fuel prices at a time of inflation and recession. The protection afforded residential users by incremental pricing was also challenged on the basis that, as incremental pricing forced industrial users from natural gas, the system costs of the pipelines and distributors would be allocated to the remaining customers. In addition, the cost increases of manufactured goods would be paid by their buyers. Legislation was introduced to repeal Title II in its entirety. But instead, the House of Representatives exercised the legislative veto provided in NGPA and voted overwhelmingly to veto the regulations implementing Phase II incremental pricing. This both left the statute intact and Phase I in operation.

1/ U.S. Congress. Committee on Energy and Natural Resources. Energy Initiatives of the 96th Congress, Publ. No. 97-73. U.S. Gov't. Print. Off. Washington, D.C. June 1982, p. 149-151.

This veto let industrial gas prices remain at the equivalent of high sulfur residual fuel oil and limited incremental pricing to a relatively narrow portion of industry. Phase I, as it remains in effect, really does little more than would otherwise be the case. Whereas the law appears to mandate that gas be incrementally priced to industrial users at middle distillate prices, the veto means that relatively few users are subject to incremental pricing at burner tip prices of about $4.00 per Mcf. The Phase II plan, seemingly mandated by NGPA, would have effected 95 percent of industrial use and would have resulted in incremental prices of about $6.50.

The legislative veto was overturned by the D.C. Court of Appeals in January 1982. The court ruled that this action was unconstitutional, and mandated that FERC promulgate a new Phase II plan in conformity with the NGPA's intent. This matter has been stayed, pending appeal to the Supreme Court. If upheld, Phase II will either be implemented or the basic law amended.

The Gas Market Since NGPA's Passage

When the price of crude oil doubled, the fundamental character of energy markets changed, leaving the rather inflexible NGPA pricing structure behind. Written with the goal of equilibrating oil and natural gas prices by 1985, and bringing them closer together than they had been during the interim, NGPA fell out of context with its initial legislative intent.

The changed economics of energy markets intereacted with the law and produced many unintended and unanticipated results. New insights into the gas market were gained, and these led to calls for remedial regulatory actions by FERC and, initially, to calls for deregulation of at least "new" (if not all) gas. The latter were replaced, as the discussion in the 97th Congress evolved, with calls for a readjustment of prices so that oil and gas would be on a more equal footing and would reach equivalency quicker. Opposing these proposals were consumer groups, who became more vocal regarding quite rapid price increases. Additionally, H.Res. 371 was introduced in the House with 226 cosponsors to express the sense of the House that FERC should take no administrative action to accelerate the rate at which gas prices were being decontrolled.

By the end of 1982, the average price of gas acquired by interstate pipelines, was well above $3.00 at roughly 60 percent the price of crude oil on a btu equivalent basis. Gas priced in accordance with NGPA varied from a few cents per Mcf to over $10, with Canadian and Mexican imports at just under $5. Under the NGPA phaseout of price ceilings, much gas will be decontrolled on Jan. 1, 1985. However, because not all classes of gas will be decontrolled, and because contracts between producers and pipelines will limit the amount of escalation for some gas that might otherwise rise to uncontrolled levels, about 40 percent of flowing oil will remain under controls or effective controls in early 1985.

LEGISLATIVE INITIATIVES

The current policy debate resulted from a "window" opened during the latter months of 1982. As a result of mid-year PGA filings at FERC, it became clear that users' gas bills were going to rise substantially from the previous heating seasons because wellhead prices paid domestic producers, on average, rose by 30 percent during the first half of the year. Concern over impending price increases caused over 50 "quick-fix" bills to be introduced in the lame duck session of the 97th Congress. These bills focused attention on matters other than wellhead pricing, and addressed the reason for the price of gas--seemingly controlled by NGPA, and limited to escalation at the rate of inflation plus a small incentive--rising from 83 cents/mcf in 1978 to over $3.00 by mid-1982. The concerns about contractual matters, "take or pay," and other ancillary items not related to price ceilings per se were developed during this discussion.

Floor action occurred in the Senate: legislation freezing the price of gas and redefining the criteria upon which pipelines are able to pass purchased gas prices through was debated, voted on, but not passed. The debate, however, which took place during the last days of the lame duck session, provided fuel for the near unanimous (90-3) passage of a resolution by Senator McClure (S.Res. 515) asking that FERC do everything in its power to stem price increases.

A fairly large number of bills were introduced in the House, ranging from deregulation to price freeze. None ever came to a vote, but all of this activity showed that a "window" existed on gas legislation.

LEGISLATION ENACTED

An important post-NGPA development that has shaped the institutional framework in which the gas market functions is the amendment of the Powerplant and Industrial Fuel Gas Act of 1978. It permits existing gas-fired electric plants to burn gas during the remainder of their existence. This was accomplished as an amendment to the Omnibus Budget Reconciliation Act of 1981 in June 1981. This means that utilities, which use about 20 percent of the nation's gas now, will continue unrestrained use in existing plants.

PROSPECTS AND PENDING ISSUES

Legislative activity in the 97th delineated issues which will carry over to the Congressional discussion in the 98th Congress. Central to any discussion will be well-head pricing and whether or not prices should rise or be rolled-back. There will be numerous issues related to producer-pipeline contracts, including take-or-pay rates, market out of unfavorable contracts (applying to both producer and pipeline sides of the transaction), and a limit on indefinite price escalators in contracts. The role of the utility pipeline industry in an environment where contract carriage--particularly with a supply surplus--is becoming more common. Access to OCS gas for intrastate pipelines is also likely to be a subject of interest to the 98th Congress.

The Alaska Natural Gas Transportation System (ANGTS)*

BACKGROUND

In 1968, a huge natural gas deposit (26 trillion cubic feet) was discovered at Prudhoe Bay. When the 97th Congress convened, there was still doubt over when or if a transportation system would be built to bring the gas to the Lower 48 States. The problem was that not enough lenders would come forward to complete the project's financing package because of soaring costs and other risks associated with the project.

The Nation's long-term need for development of new gas resources was readily apparent. Proven reserves of conventional gas in the Lower 48 continued to decrease because the United States has been consuming more gas than it's discovering. In 1973, the United States consumed three times more gas than it found and in 1979, it consumed 40 percent more than it found. As a result, U.S. proven gas reserves, which were 292 trillion cubic feet (tcf) only 14 years ago, were in 1980 only 195 tcf of which 32 tcf was in Alaska.

There was little doubt about the potential demand for Alaska gas providing the price was right. Some experts argued however, that Alaska gas would be too expensive to compete with gas produced in the Lower 48 as well as with most residual and distillate oil. This would especially be true they argued, because oil prices would moderate during the 1980s mainly due to decreasing oil demand. Others conceded that Alaska gas would be expensive in the first years of the project, but in the later years, they argued, its price would be sigificantly lower than the alternatives. Moreover, it was claimed that the average Alaska gas price during the life of the project would be less than the average price of its energy competitors.

Risks associated with the project were substantial, but so were the potential benefits. Many of these benefits depended on the project's final cost and the future behavior of the world gas and oil markets. Also, such domestic factors as future gas deregulation, national security considerations and any future discoveries of other Alaska gas resources would influence the magnitude of benefits. Two Federal government-sponsored studies, however, showed that the economic benefits to the nation could amount to billions of dollars. 1/

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The main risk was in the decision to commit a great money to a project which has a high probability of some cost overruns and some probability (its magnitude is controversial) of large cost overruns. Investors were unwilling to finance a project that had a base price of $40 billion (current dollars) because any construction delays or other problems associated with a project of this scope could cause project costs to get out of control resulting in project abandonment or, more likely, a project that could never pay for itself. To complicate matters, the project sponsors (all of which are pipeline companies) did not have sufficient financial clout to rescue the project if the worst began to happen.

To strengthen the financial safety net for the project, the sponsors urged Alaska gas producers (Exxon, ARCO and Sohio) with their large financial assets, to participate in the project. The plan they formulated involved regulatory changes which had to be ratified by the Federal Government. The changes became known as the "waiver package" and were specifically designed to reduce the risk associated with the project.

LEGISLATION ENACTED

On October 15, 1981, President Reagan formally submitted to Congress the package recommending the waiver of a number of laws to "clear governmental obstacles to proceeding with private financing to this important project [ANGTS]". The package, submitted in the form of a joint resolution (H.J. Res. 341), had its legislative roots in the Alaska Natural Gas Transportation Act of 1976 (ANGTA) which authorized the President to make such recommendations if it permitted expeditious construction and initial operation of the system."

However, ANGTA also limited the process by which Congress could act on the bill. Once submitted, the waiver package was unamendable, had to be approved by both Houses to take effect, and the Congress had 60 days to act, or the package would be deemed rejected.

1/ The Aerospace Corporation. Alaska Natural Gas Transportation Systems. Economic and Risk Analysis. Final Conclusions and Results. Prepared for the Department of the Interior, February 1976. And ICF Incorporated. A Review of Alaska Natural Gas Transportation System Issues. Submitted to the Federal Energy Regulatory Commission, May 1979.

The waiver package consisted of the following elements:

1) Producer ownership: The gas producers could participate in equity ownership of the Alaska segment provided there was no inconsistency with antitrust laws and no restrictions on access to the pipeline or capacity expansion.

2) Conditioning plant: The gas conditioning plant would be included as part of the pipeline for all legal purposes.

3) Hearings: Requirements for formal FERC evidentiary hearings were eliminated unless FERC determined that such a hearing was necessary.

4) Revisions: FERC would have no authority to change any final tariff rule, or issue orders that in any way, impaired recovery of operating and debt costs. Nor could FERC change orders to allow purchasers of Alaska gas to recover all cost approved under the tariff.

5) Shipper status: The U.S. pipeline consortium (sponsors) and any other shipper of gas through the Alaska segment would be considered a "natural gas company" for purposes of the Natural Gas Act.

6) Import, export: Gas transported through the Alaska segment would be free of export restrictions if delivered to Canada and replaced by Canadian downstream gas. Such Canadian gas would also be free of U.S. import rules.

7) Pre-billing commencement: FERC's final tariff plan would set a specific date as a reasonable time for completing the entire project. If the Canadian segment of the pipeline was finished, the Canadians on that date could start charging U.S. consumers a rate covering their debt, equity and operating costs. The U.S. part of the project would be divided into the conditioning plant segment and the pipeline segment. The rate set by FERC would allow the sponsors of each segment, when completed, to recover debt and operating expenses starting on that fixed date. When the entire system was completed and gas was flowing, the sponsors would be allowed to recover equity costs.

The most controversial element in the package was the pre-billing commencement provision. Its intent was to give the U.S. sponsors an incentive to finish the project on time while giving lenders some assurance of payment. And at the same time, discouraged the Canadians from moving too rapidly to complete their portion before a fixed date.

Although much would depend on the completion date set by FERC, the pre-billing provision nonetheless imposed a potential liability of $1.7-2.9 billion dollars on the future consumers of ANGTS gas. 2/ This liability could increase depending on the behavior of the industrial consumers and on any project delays.

The potential impact of the industrial sector was especially noteworthy because most companies would either pass the increased cost to their customers through product price increases or, more likely, switch to a cheaper source of energy such as residual oil. If massive switching were to occur in this sector, then the average monthly cost to consumers in the residential and commercial sectors would skyrocket because the industrial sector would bear 50 percent of the consumer liability.

The length of time any part of the project could remain idle and require payments by the consumer would be difficult to estimate. A project delay of one year, however, would not be unreasonable considering the Arctic weather, the technical complexities of the conditioning plant and the Alaskan pipeline segment, and the past experience of delays in the construction of the Trans Alaska Oil Pipeline System (TAPS).

Many Members of Congress felt the pre-billing provision was unfair and could be very costly to consumers, but the bill was enacted into Public Law 97-93 on December 10, 1981 for three basic reasons. First, the legislative options were few (the bill had to be voted either up or down) because the joint resolution could not be amended. Second, during Congressional hearings, experts had testified that the waiver package was essential to the project's ability to obtain financing, although perhaps not sufficient to assure it. Third, President Carter and the 96th Congress had given assurances to the Canadian Government that the U.S. Government would seek to remove those obstacles which might stand in the way of private sector financing of the project. The 97th Congress acted to fulfill those assurances.

PROSPECTS AND PENDING ISSUES

Even though Congress enacted the bill, there is still no guarantee that project financing will become

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2/ Major Issues Associated With The Alaska Natural Gas Transportation Waivers. Congressional Research Service. Prepared at the request of the House Energy and Commerce Subcommittee on Fossil and Synthetic Fuels. December 18, 1981. 137 p.

a reality. Indeed, in May 1982, the project was put "on hold" for least two years because of a demand slowdown in the energy markets. It is believed that if financing problems remain, four potential solutions exist: (1) gas producers would have to risk more equity than the approximate $3 billion each has pledged; (2) the State of Alaska would have to assume part of the risk; (3) the Federal Government could guarantee the loans; or (4) the North Slope producers could abandon ANGTS and convert the natural gas to methanol or LNG for conventional distribution.

In the Fall of 1982, the State of Alaska took the initiative by announcing a comprehensive study of the "ANGTS" project and alternatives to it. One alternative which received close scrutiny involves a pipeline following the (TAPS) pipeline to Alaska's tidewater region where a conditioning plant, LNG export facilities a petrochemical complex would be built. The initial phase of the project would utilize one-third (1 bcf per day) of the carrying capacity in a newly constructed pipeline. After the gas was processed, the methane would be converted to LNG and the byproducts would be converted to particular petrochemicals based on anticipated demand in the marketplace. Capacity could be added as the demand increased. The study, which is due in the first half of 1983, will contain recommendations on ways to overcome financial and regulatory obstacles, and to start an organization to begin the pipeline project. Other topics include marketing, government cooperation and financing. The study's results are likely to give experts ideas for the possibilities of future Congressional involvement.

Coal Policy*

BACKGROUND

Excluding legislation introduced to dredge ports through which extensive amounts of U.S. coal exports are shipped, the 97th Congress was the source of little activity directly affecting the coal mining industry. Although there was a distinguishable about-face in executive branch policy, the new approach was implemented through regulatory changes within the framework of laws already enacted. For example, the new Administration made sweeping changes in surface mining and coal leasing regulations amid opposition charges that congressional intent was being pre-empted by the regulatory process. The congressional response, however, was not to legislate further limitations on these activities, but rather to exercise oversight authority and to restrict agency activities through the budget process.

Export Markets and Dredging

Beginning in the last half of 1980, export demand for steam coal began to increase for reasons that at the time were only partly understood. Many industry spokesmen believed that the long-awaited conversion of European utilities from oil and natural gas to coal had finally begun. Furthermore, the conversion was happening at a time when South Africa, Poland, and Australia (all major U.S. competitors) were essentially out of the export market because of labor disruptions. Dozens of colliers were dispatched to major U.S. coal-loading facilities in Norfolk, Baltimore, Philadelphia, and Mobile and by the spring of 1981, U.S. ports were jammed. Reports of 60-day loading delays and $10,000 per day demurrage charges were not uncommon. Industry analysts predicted that if the U.S. intended to capture its share of the expanding world market, it would have to dredge all of its major harbors and shipping channels to 55 feet in order to accommodate "super colliers" of 100,000 tons or more.

One response in Congress to the "crisis" was the introduction of numerous bills for port improvements. The programs in the bills ranged from 100-percent Federal funding of such improvements, to cost-sharing with local governments, to funding further analysis of the problem. Numerous hearings were held at which foreign coal buyers predicted that coal exporters without access to deep-draft loading facilities would eventually be shut out of the coal trade. The ensuing debate divided the large, well-established ports from the small ports, the former favoring cost-sharing schemes for improvements and the latter supporting 100-percent Federal funding.

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The Administration's initial position was that all dredging and improvements along with operation and maintenance fees should be paid by the proceeds of a port-user fee. Equitably applying such a fee, however, posed problems and also became the subject of debate. It was uncertain whether all vessels, including shallow-draft vessels, should pay the user fee or if only those vessels requiring the deeper ports and channels should pay. How should the benefits to shippers be measured? The Administration finally relented and signalled Congress that Federal/State-local cost-sharing for port improvements was an acceptable compromise, but not until the loading crisis had already been solved by the railroad companies that own and operate the loading facilities. The unwillingness of foreign buyers to negotiate long-term coal contracts defused the "crisis" and much of the dredging issue. Representatives of the public and private sector argued that if European buyers expected major U.S. port improvements, they should at least be willing to provide some reasonable expectations that the initial improvements and maintenance costs could be justified by predictable, long-term commitments. The commitments never came, and the dredging has not been done. In retrospect, there are indications that the surge in demand was due to European panic buying resulting from supply interruptions from foreign coal exporters in 1980 and an anticipated UMWA strike in 1981.

Small Mines

Increasing regulatory requirements (for both miners and consumers) and the accelerating sophistication, advanced planning, and fine tuning of coal-fired boilers have created a difficult existence for small mines. These are mines (large in number, limited in output and usually surface mines) which have historically operated without long-term contracts and which have been the backbone of the spot-coal market. Whenever coal demand has exceeded supply, small mines have been quickly able to respond by scraping out a few thousand tons of coal and, when demand receded, suspend their operations. However, surface mining legislation in 1977 greatly limited flexibility of these operators. Before coal can be mined, satisfactory reclamation plans must be prepared, permits have to be filed and approved, and, after satisfying all applicable requirements, the lag time for mine development or expansion may exceed short-term demand surges.

From the perspective of the utility industry, shrinking profitability and sulfur limitations have forced them to become discriminating buyers. Steady, high volumes of coal that strictly conform to contract specifications are required to avoid environmental penalties and the de-rating of boilers. It is generally easier for large independent or integrated and captive mines (those owned by the utilities) to comply with these requirements.

The transportation component of the coal supply chain has also contributed markedly to the demise of many small operations. Railroads no longer wish to serve mines that cannot qualify for unit-train service. Unit trains normally carry 10,000 tons of coal and large (1200 megawatt) power plants can require up to four trainloads per week. In some instances, the railroads in Appalachia have removed rail sidings from small mines, forcing them to truck their coal to the nearby facilities of their larger competitors, usually at an additional cost. Access to coal slurry pipelines may not be the solution. To be economic, pipelines likewise require large volume, point-to-point traffic. Current proposed pipelines are being designed with annual throughputs of over ten million tons. The pipeline collection of output from dozens of small mines would be cumbersome and would reduce the competitiveness of a pipeline.

Coal Transportation

The coal mining industry and the railroad industry are closely linked. In 1981, 67.7 percent of total coal production (554 million tons) was transported by rail. Conversely, "Coal is the most important commodity carried by the railroads in terms of tonnage and revenues." For the same year, coal accounted for 36.3 percent of total railroad tonnage and 20.2 percent of total rail revenues ($5.976 billion). 1/ Consequently, any legislation affecting the rail industry reverberates throughout the coal industry.

In 1976 and 1980, Congress, to revive an ailing rail industry, enacted legislation which, according to coal and utility industries spokesmen, has become their nemesis. These laws are the Railroad Revitalization and Regulatory Reform Act ("The 4-R Act") and the Staggers Rail Act, respectively. The railroads view that the deregulation of the railroads was intended to restore their revenue adequacy and to enable them to continue service on many routes which had long ceased to be profitable and which were targeted for abandonment. The coal industry, however, feels

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1/ Coal Deregulation: Impact on Coal, U.S. Department of Energy, Energy Information Administration, DOE/EIA-0399, August, 1983, p. 3.

that the railroads, with the consent of the Interstate Commerce Commission (ICC), have exceeded the congressional intent of both the 4-R Act and the Staggers Rail Act through very broad interpretations of what constitutes "competition" in coal transportation. A broader concept of competition narrows the definition of captive shippers. The coal industry argues that, given the substantially higher cost of truck haulage, many mines, not having access to barge-loading facilities and without the existence of coal slurry pipelines, for all intents and purposes, could become more dependent on a single rail-carrier for transportation of coal to its market.

The rail industry, however, responded that deregulation enabled them to establish contracts with coal companies, which boosts predictability of shipments and thereby lowers rates.

Apart from the merits of the arguments raised, deregulation of coal freight rates will most likely continue to be a hotly debated issue and the focal point of congressional oversight. Rate problems could ultimately result in amending legislation to the 4-R Act and Staggers Rail Act depending on whether or not the coal industry proves its case that it is more dependent on the railroads than is perceived by the ICC.

Reorganizing the Office of Surface Mining-- Moving the Denver Regional Office of O.S.M.

Late in 1980, the Office of Surface Mining was the subject of a very critical Heritage Foundation report, which characterized it as the archetype of excessive Government regulation. 2/ Consequently, the Office of Surface Mining was selected by the incoming Administration as an example of the Federal Government returning a significant amount of regulation of an industry to the States. To accomplish this, the new leaders of the OSM on May 20, 1981, with little advance notice, announced a plan to begin reorganizing the Agency. 3/ The plan was to eliminate the five regional offices, the majority of the district and field offices and to create, in their place, technical service centers whose purpose would be to assist the newly established individual State agencies. The reorganization was to be completed in phases by May 1982.

2/ The Heritage Foundation. A Mandate for Leadership. Chapter 8: The Department of the Interior, by Robert L. Terrell, 1981. p. 333.

3/ Executive Order No. 3065, May 20, 1981, by Secretary of the Interior, James Watt.

The justification for this comprehensive and controversial action was twofold. First, the incoming Administration felt that, to be consistent with congressional intent as expressed in the Surface Mining Control and Reclamation Act, the Federal role should be reduced to one of oversight with the primary responsibility for regulation being transferred to the State agencies. Second, it felt that eliminating the regional and district offices would result in substantial savings in administrative costs.

The element of the reorganization that generated the greatest debate was the proposed elimination of the Denver regional office and the relocation of that function to Casper, Wyoming. The 112-person office was to have been replaced with the following installations: (1) a 48-person technical center in Casper, (2) an 11-person State office, also in Casper, (3) a 4-person State office in Olympia, Washington, and (4) a 14-person State office in Albuquerque, New Mexico. All of the proposals for the Western Region would have reduced the staff to 77 from the actual 112 and the authorized 141.

On June 5, 1981, two weeks following the announcement of the reorganization, the Subcommittee on Civil Service of the House Committee on Post Office and Civil Service held hearings in Denver to evaluate the legitimacy of OSM's claims regarding the savings and efficiency of its proposal. 4/ The Subcommittee extended an invitation to the Washington Agency heads to present their case. Initially, the invitation was allegedly declined on the basis of limited travel money, but Agency heads later charged that they were excluded from the Denver proceedings.

At the hearings, witnesses for the State agencies, environmental groups, and some of the other Federal agencies associated with the Federal Office of Surface Mining presented strong counterarguments to the claim that elimination of the Denver office would increase overall productivity.

First, it was pointed out that the greatest concentration of mines on Federal lands was in the West. Of the total of 180 mines within the jurisdiction of the Denver regional office, 125 (about 70 percent) were being operated on Federal lands. The ultimate responsibility for regulating these mines would therefore not be with the newly established State offices, but would remain within the Federal agency. Second, it was feared by some members of the

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4/ Office of Surface Mining, Denver, Colorado, Hearing before the Subcommittee on Civil Service of the Committee on Post Office and Civil Service, House of Representatives, Ninety-seventh Congress, June 5, 1981, Serial No. 97-17, p. 2.

OSM regional staff and by various State representatives that moving the Denver office would result in a communications breakdown between engineering technicians (who were responsible for the development and approval of mining and reclamation plans) and members of the Solicitor's office (whose responsibility it was to see that the mine operators remained in conformance with the approved plans). Third, there was concern from the opponents of the proposal that moving the office would also cause coordination problems between OSM and other government agencies such as the Bureau of Land Management and the Geological Survey, whose input was necessary in regulating mining. Finally, the move to Casper would not have been possible for all of the Denver personnel. Many of the experienced mining engineers, biologists, botanists, and other professional staff members, for a variety of reasons, had expressed a preference to stay in Denver rather than uproot their families. Consequently, the Casper Technical Service Center would have to be started with a large percentage of inexperienced staff, which would have further hampered the program.

Arguments were presented at the hearings that moving the regional office would not necessarily result in savings to the government. Denver, a regional subcapital, is the hub of communications, transportation, and the location for either the home or district offices of many of the energy companies mining coal in the West. Even if the OSM regional office were moved to Casper, most of the staff of OSM, in order to discharge their duties, would still be required to travel either to or through Denver. Notwithstanding the fact that the Federal role would eventually be reduced, the most efficient location for that function still appeared to be its then-present location.

In deference to the objections that had been raised during the hearings, the Office of Surface Mining decided to locate the Western Technical Center at Denver and to open a series of State liaison offices, one of which was located in Casper, Wyoming--a compromise to settle a controversial issue.

Leasing of Federal Coal to the Railroads, Repeal of Section 2-C of the 1920 Minerals Leasing Act

One purpose of the Federal Coal Leasing Amendments Act of 1976 was to ensure that "a primary concern of any future coal leasing program on public lands should be the maximum economic recovery of the available coal resources." 5/

The legacy of Western Federal land disposal policies and practices, however, is an ownership pattern often incompatible with maximum coal development in some geographic areas. For example, a vast amount of Western land has split estates, i.e., the surface ownership has been tendered to private interests, and the mineral estate (or ownership) has been retained by the Federal government. Other land grant acts conveyed designated sections of land within each township to the States for purposes of developing and maintaining public schools. The land grants creating the greatest bottleneck to coal development were those conveying land to major railroads during the last half of the 19th century. 6/

During the early and mid-19th century, there was an urgency to push both communications and transportation westward as fast as possible. Because the prospect of building railroads into the wilderness to link the Midwest and West Coast did not appeal to some of the private development companies and sources of capital, Federal incentives were proposed. These incentives consisted of a series of acts, such as the Pacific Railroad Act of 1862, which granted lands to these companies.

The purpose of these grants was to provide the development companies with sufficient construction revenues through their sale of these lands. Some of the lands were sold by the railroad companies, while others were simply mortgaged for construction funds. It was originally intended that the grant lands be conveyed in alternate rather than contiguous sections and be located as close as possible to the route, although homesteading and other claims made prior to construction of the railroad sometimes made this difficult.

The program originally granted 12 one-square-mile sections (640 acres per section) for each mile of roadbed

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5/ U.S. Congress. House. Committee on Interior and Insular Affairs. Federal Coal Leasing Amendments Act of 1975; report together with additional views to accompany H.R. 6721, 94th Congress, 1st session. Washington, U.S. ating the greatest bottleneck to coal development were Gov't Print. Off., 1975. 59 p.

6/ For a more complete history of the railroad land grant program, see Gates, Paul W. History of Public Land Law Development. Public Land Law Review Commission. November 1968.

constructed, and prohibited the selection of known mineral lands. These guidelines were subsequently liberalized. The number of sections per mile was increased, and lands containing coal and iron ore became eligible for selection. Congress expressed its intent (in the Pacific Railroad Act of 1862) that if the lands were not sold by the railroad companies to raise construction funds, ownership should revert to the Government, and the land should be opened for homesteading and other purposes. Although a great percentage of the land had, in fact, not been sold, court decisions ruled that mortgage of the grant lands by the railroads constituted disposal of the land under the laws.

This land grant program, aggressively pursued by the Federal government during a ten-year period, resulted in the conveyance of an estimated 126 million acres of Federal land to the railroads. A great portion of this land is underlaid with rich, thick seams of coal, low in sulfur and relatively close to the surface, and easily mined. Consequently, a few of these railroads are now some of the largest owners of coal in the United States. The Burlington Northern alone, according to the most recent edition of the Keystone Coal Industry Manual, owns approximately 14.7 billion tons of coal, and the Union Pacific owns another 10 billion tons.

Because the original land grants required that every other section of land be conveyed, the resulting ownership pattern of much of the western land with coal reserves resembles a giant checkerboard, with the railroads and the Federal Government owning alternate sections. This creates considerable difficulty in forming larger mineable blocks, commonly refered to as "logical mining units," or LMUs, out of the checkerboard ownership patterns.

When the Mineral Leasing Act of 1920 was enacted, it included section 2(c), which generally prohibits the leasing of Federal coal to the railroads. The purpose of this restriction was to avoid concentration of coal production and transportation would entail. 7/

The rapid increase in world oil prices which occurred in the 1970s focused the Nation's attention on its abundant coal reserves. During its examination of the Nation's ability to shift from imported oil to domestic coal, the Congress discovered that substantial reserves of Federal coal had been liberally leased during the 1960s, and that virtually no development of these reserves was taking place

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7/ For a more complete explanation of the intent of 2(c), see Baldwin, Pamela. U.S. Library of Congress, Congressional Research Service. Legislative History of Section 2(c) of the Mineral Leasing Act of 1920. April 13, 1981.

at a time when the U.S. was badly in need of more energy. The Federal Coal Leasing Amendments Act of 1976 was designed to stimulate the development of Federal coal reserves. But in areas where the checkerboard ownership patterns remain, section 2(c) of the original 1920 Minerals Leasing Act continues to complicate the formation of logical mining units and efficient resource development. Eliminating 2(c) could increase Federal revenues from coal leasing in areas now largely precluded from leasing to either independent coal companies or railroads.

LEGISLATIVE INITIATIVES

Despite the deterioration of the coal market and the concerns expressed by coal-state legislators, the efforts of the 97th Congress resulted in no enactments other than appropriations bills. Although the House and Senate held numerous hearings on coal-port dredging, coal exports, and the repeal of restrictions on leasing Federal coal to railroads, none of the related bills received floor action by either House. A few House and Senate resolutions were passed by voice vote only, but these were limited to mere expressions of urgency that some further action be taken to facilitate coal exports. These bills were generally categorized as national coal-export policy acts.

Coal Port Improvements

Bills to improve the Nation's coal ports received more congressional attention than any other category of coal legislation. Interestingly, there was little debate on whether or not ports should be improved. Instead, the debate emphasized how to finance the improvements. A panoply of bills included those citing historical precedent that the complete maintenance cost of navigable waterways had always been borne by the Federal Government and should remain so, while others reflected the philosophy that general revenues should not be used to benefit a particular segment of industry or class of shipper. These bills suggested that deeper-draft ships should be willing to pay the incremental cost of deeper channels. Within the latter group of bills, the opinions varied. Some favored (1) charging a user fee for both the initial deeper dredging plus operation and maintenance charges (O&M), while others advocated (2) financing the improvements from general revenues and levying a user fee for O&M. Other bills included proposals for recovering a portion of the combined cost of dredging plus O&M, and some provided initial Federal funding subsequently reimbursed by local governments levying a user fee to retire the debt.

The bills trending toward complete or partial funding would clearly benefit port cities with either minor coal-loading facilities or none at all. Those requiring complete reimbursement through a user fee would benefit the major coal ports such as Norfolk, Baltimore, Mobile, and Philadelphia. These cities have long exported coal and have considerable exporting infrastructure. Because of their already-high volume, any user fee would have amounted to less for each ton of coal exported. H.R. 4627 and H.R. 4691 would have applied a user fee to reimburse the Federal Government for 50 percent of construction cost and 50 percent of operation and maintenance. H.R. 4810 would have prohibited the application of a user fee for port improvements. H.R. 4846 would have recovered 100 percent of operation and maintenance from a user fee plus an assessment to recover construction costs. H.R. 4862 would have applied a nationally uniform user fee (percent not designated) to finance port improvements. S. 68 would have provided for 75 percent of improvements to be Federally financed. S. 1586 would have recovered all operations and maintenance costs with a user fee based on the commodity, the amount to be established by the Secretary of the Treasury. S. 1692 would have continued the major Federal role, but would have shifted new deep-harbors responsibility to local authorities and would have permitted them to levy a user fee.

Coal Leasing

Coal leasing legislation was introduced to deal with several different concerns. Mr. Kogovsek sponsored H.R. 5895, which would have amended the Mineral Lands Leasing Act to revise production and development requirements under a coal lease. The Act would also have been amended by H.R. 3313 (Mr. Udall), which would have amended the Mineral Leasing Act of 1920 to prohibit major oil companies from directly or indirectly acquiring any coal lease or locating and recording any claim for uranium or other fissionable materials and would have allowed any holder of a mineral lease to modify or revise a lease to include a limited amount of contiguous lands. Senator Murkowski would have amended the Act with S. 2704, which would have revised the production and development requirements under a coal lease.

LEGISLATION ENACTED

In the Interior Department appropriations bill, coal leasing was the subject of some debate. The House bill took $2.13 million from the Department's coal leasing account, postponed two lease sales scheduled for 1983, and criticized Interior for its coal leasing policies. The House, however, acceded in conference to Senator McClure's position of retaining the original coal leasing appropriation and of removing the criticism. The conferees did postpone one sale from the third to the fourth quarter of 1983 and another from the fourth quarter of 1983 to the first quarter of 1984, while the Interior Department was to reexamine its policies. This bill was signed into law (P.L. 97-394) at the end of the 97th Congress.

PROSPECTS AND PENDING ISSUES

Coal Transportation and Rail Deregulation

The effects of rail deregulation just began to emerge during the 97th Congress. Under recent legislation (the 4-R and Staggers Acts), the Interstate Commerce Commission (ICC) has been relieved of much of its authority to regulate rail rates. It has also been given considerable latitude to determine which tariff changes fall under its purview and which do not. Of the rate changes now under the authority of the ICC, only those exceeding a specific percentage increase (revenue adequacy) can be examined. The Commission, under the Reagan Administration appointees, is likely to take a "hands-off" attitude toward substantial rate increases. It may also conclude that, in spite of mergers that are concentrating the power of larger rail carriers, adequate competition in coal traffic still exists, and that few coal companies are actually captive to the railroads.

This emerging policy of the ICC is alarming the coal industry. It has objected to ICC rulings on coal-rate cases and has offered its opinions that exorbitant transportation charges are unnecessarily increasing residential electricity bills and are damaging the coal industry's ability to compete in world coal trade. 8/ Spokesmen for the industry have even suggested that Congress may wish to seriously review the effects of the earlier legislation to evaluate ICC consistency with congressional intent and even to consider amending legislation to the 4-R and Staggers Acts. Short of amendments to these laws, Congress is likely to maintain a close oversight on coal freight-rate developments during the 98th Congress.

Repeal of Section 2-C of the 1920 Minerals Leasing Act of 1920

The repeal of section 2-C (to restrict the leasing of Federal coal to railroads) of the 1920 Minerals Leasing Act will likely receive attention during the 98th Congress. Permitting railroads to lease Federal coal and to compete with the independent coal companies they serve is likely to become more controversial, as laws deregulating rail rates begin to have their full effect. The Staggers Act, the

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8/ National Coal Association. Coal Policy Issues. Section 9-A: Coal Transportation.

most recent of these laws, provides for contract rates between coal producers and carriers. These contract rates do not have to be disclosed, nor can they generally be regulated by the Interstate Commerce Commission. Independent coal companies are concerned that if railroad affiliates are allowed to mine Federal coal in conjunction with their own holdings, they could establish discriminatory contract rates. Given the vast holdings of the railroads (they are already the largest private owners of coal in the U.S.), preferential rates could significantly and adversely affect the ability of the independents to compete for domestic and overseas markets.

Coal Slurry Pipelines*

BACKGROUND

Coal is hauled by barge and truck, but railroads were the exclusive movers of 60 percent of the coal mined during 1981 in the United States for domestic consumption. 1/ Eighty-five percent of the coal carried by railroads is considered to be "captive" in that there is no alternative to rail to move the coal from the mine-mouth to the point of use. Over the years, as an alternative to trucks and barges, a number of coal slurry pipeline projects have been proposed to move coal from mine sites to utility plants. Slurry pipelines transport pulverized coal suspended in water or some other liquid medium.

In some instances, a pipeline can enable the consumption of coal in regions which are not served by rail or barge. Supporters of the pipelines, however, also believe that the pipelines will provide competitive leverage to moderate the coal-haul rates charged by railroads. Therein lies the Congressional role in the coal pipeline debate. Invariably, the route of a proposed pipeline crosses land owned or controlled by the railroads, which have refused to grant rights-of-way for pipeline construction. In each of the past five Congresses, legislation has been introduced which would permit pipeline companies to apply to the Federal Government for eminent domain. 2/

Coal pipeline legislation advanced further in the 97th Congress than it ever had before. This would appear to be related to the enactment in the 96th Congress of the Staggers Rail Act of 1980 (P.L. 96-448), which essentially deregulated railroad rates for the hauling of coal for domestic use. In addition to authorizing railroads to enter into long-term service contracts, the Act also established rate thresholds below which rail rates would not be subject to review by the Interstate Commerce Commission (ICC). The coal industry had supported the Staggers Rail Act with the assurance that protection would be afforded captive shippers. Subsequent to passage of the Act, however, the ICC issued a number of decisions which led the industry to fear that the intention of the Act was being contravened. In one decision, which has been challenged in the U.S. Court of Appeals, the ICC eliminated certain tests for demonstrating railroad market dominance in a region, making it more difficult for a coal consumer to show captivity to railroad transportation. Another pending rulemaking appeared to the industry to allocate a disproportionate share of railroad fixed costs to coal transportation [3]

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*By Robert L. Bamberger, Environment and Natural Resources Policy Division.

1/ U.S. Department of Energy. Energy Information Administration. Coal Distribution: January-December 1981. DOE/EIA0125 (81/4Q): p. 16.

2/ Eminent domain is the right to appropriate private property for public use without the consent of the property owners, upon payment of just compensation. Exercise of the right of eminent domain is premised upon the conviction that there are instances where the public interest should take precedence over that of individuals.

The National Coal Association, among others, has suggested that enactment of eminent domain legislation is a logical complement to the Staggers Rail Act because the Act has effectively deregulated railroads while they remain in a position to frustrate competitive modes of transport by refusing rights of way to coal pipelines. Utilities which felt that they had been subjected to what they felt were unreasonable rail rate increases over the past few years joined the National Coal Association and consumer interest groups to form a stronger coalition to assure a comparably "unfettered" market for coal slurry piplines.

LEGISLATIVE INITIATIVES

Overall, coal slurry pipeline legislation fared better in the 97th Congress than it has in the last five Congresses in which eminent domain legislation has been introduced. By the time the 97th Congress recess in August 1982 for the fall elections, the legislation had been reported from committee in both Houses and awaited action by the Rules Committee in the House. Coal pipeline legislation had never been reported out by a Senate Committee before. A slurry bill reached the House floor during the 95th Congress, where it was defeated, 246-161, on July 19, 1978. Hearings were held in the House during the 96th Congress but the legislation was never reported from committee.

In the 97th Congress, coal pipeline legislation survived entanglements in both House and Senate committees and was reported to the full bodies. In the House, the Coal Pipeline Act of 1981 (H.R. 4230) was introduced on

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[3] National Coal Association. Coal Policy Issues. July 1, 1982: p. #11B. See also the testimony of the National Coal Association appearing in: U.S. Congress. House. Committee on Public Works and Transportation. Subcommittee on Surface Transportation. Coal Pipeline Act. Hearings on H.R. 4230. December 8 and 9, 1981: p. 112.

July 22, 1981. The legislation would have established procedures for the Interstate Commerce Commission, upon review, to issue a certificate of "public convenience and necessity to construct, operate or maintain a coal pipeline." The Senate bill, S. 1844, introduced by Senator Bennett on November 12, 1981, was comparable except that it vested certification with the Department of Energy.

The Administration was opposed to the legislation. On November 17, 1981, Interior Secretary James Watt had testified before the House Interior Committee that the bill appeared to be another instance in which decisionmaking most appropriately vested with the States was being claimed by the Federal Government. The Secretary noted:

> Whether the claims of slurry advocates or the charges of slurry opponents are true is beyond the scope of this testimony and, perhaps, even beyond the reach of Federal legislation. These are controversies only the market can settle.

In a letter accompanying Watt's statement, the President said it was inappropriate for the railroads to "thwart projects beneficial" to the nation for "their own parochial purposes," but that the Administration would not support eminent-domain legislation to overcome difficulties in acquiring rights of way. "Our commitment to the vitality of state governments should not be abandoned simply because it may at times be inconvenient," he said. 4/

Despite Administration opposition, the bill survived the House Interior Committee, albeit by one vote (21-20) on December 8, 1981, with 11 Democrats and 10 Republicans voting for the measure. The measure was reported to the House on January 29, 1982. 5/ The legislation was then referred to the Subcommittee on Surface Transportation of the Committee on Public Works and Transportation, which had held hearings on December 8, 1981. The subcommittee voted favorably on the measure on March 30, 1982, by a vote of 17-14. The measure was referred to the full Committee where it would encounter a more difficult path.

4/ Mr. Watt's testimony and the presentation of the President's position of the eminent domain appear in: U.S. Congress. House. Committee on Interior and Insular Affairs. Coal Pipeline Act of 1981. July 30 and November 17, 1981: p. 96-99.

5/ U.S. Congress. House. Committee on Interior and Insular Affairs. Coal Pipeline Act. Report with amendment to accompany H.R. 4230. (97th Congress, 2d session. House. Report no. 97-423, part I).

On July 27, H.R. 4230 narrowly survived a motion to table the bill, sponsored by Reps. Bud Shuster (R-Pa.) and Bob Edgar (D-Pa.). Rep. Shuster urged that further hearings should be held to consider the implications for the legislation of recent court decisions on State water rights. 6/ A number of amendments intended to cripple the legislation were then offered and defeated before the committee completed work on the bill, reporting it out by a vote of 26-20. The committee report was filed in the House on August 10, 1982. 7/

Opponents of the legislation in the House succeeded in keeping it off the floor before the election recess, and in the lame-duck session the House Rules Committee did not act on it. There was little impetus in the Senate to move in the absence of action by the House.

The legislation moved more slowly at first in the Senate, where there was considerable concern on the part of some influential members of the Senate Energy Committee about language in the legislation to guarantee the primacy of State water law. Senator James McClure, Chairman of the committee, did not schedule hearings on the legislation until May 10, 1982. A second hearing, specifically on water issues, was held June 8. Mark-up was held in late July, and the legislation reported to the Senate on August 17. 8/

Though the legislation had initially been accorded a good chance of passage in the post-election session, it was too contentious to compete with an already full agenda of budget and defense issues, and the proposed increase in the Federal excise tax on gasoline. In the end, the coal pipeline legislation, which had survived several narrow scrapes in committee, was defeated by inaction.

6/ Rep. Shuster had in mind the Supreme Court ruling in Sphorhase v. Nebraska, described elsewhere in this chapter.

7/ U.S. Congress. House. Committee on Public Works and Transportation. Coal Pipeline Act. Report to accompany H.R. 4230, with amendment. (97th Congress, 2d session. House Report no. 97-423, Part II).

8/ U.S. Congress. Senate. Committee on Energy and Natural Resources. Coal Distribution and Utilization Act of 1982. Report together with additional and minority views to accompany S. 1844. (97th Congress, 2d session. Senate. Report no. 97-523).

PROSPECTS AND PENDING ISSUES

The coal pipeline issue has many diverse policy facets: water use, the commerce clause and protection of States' rights, economics of competing modes of coal transprotation, projected domestic and export demand for coal, the present and future health of the railroad industry. and the market mechanisms for establishing the price for coal. These many aspects of the coal slurry debate ribboned the claims and counterclaims during debate over the coal slurry legislation (S. 1844, H.R. 4230). A brief review of some of these issues will help to explain the failure of that legislation to pass and to indicate the status of the debate as the 98th Congress began.

Economics of Coal Slurry Pipelines

The Economic potential of coal slurry pipelines was demonstrated more than 20 years ago. In 1957, the Consolidated Coal Company began operation of a 108-mile coal slurry pipeline (Eastlake Pipeline) which ran from Cadiz, Ohio, to a point just outside Cleveland. The railroad rate had reached $3.47/ton while the pipeline was able to operate at $2.20/ton. Competition from the pipeline and economic efficiency prompted the railroad to introduce unit trains which averaged 100 cars in length and which were placed in service solely to haul coal between the same point-of-origin and destination. This enabled the railroad to lower its rates per ton below those charged by the pipeline, which was shut down as a result in 1963. Nevertheless, supporters of coal piplelines cite the Eastlake Pipeline as one instance of the ability of the coal slurry pipelines (or the threat of their construction) to moderate rail coal-haul rates or introduce further efficiencies in rail operation.

One coal slurry pipeline is currently in operation--the Black Mesa Pipeline, which runs 273 miles from northeastern Arizona to southern Nevada. Particularly significant to advocates of coal slurry pipelines is the fact that the Black Mesa Pipeline is a wholly-owned subsidiary of Southern Pacific Railroads, which believed that installation of a pipeline to serve that route was more practical than laying rail through mountainous terrain. 9/

There has been considerable argument about the direct and indirect economies of coal pipelines. Generally it is argued that pipelines would be cheaper because once they

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9/ See: U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on transportation and Commerce. Coal Slurry Pipelines. Hearing on H.R. 6879. August 28, 1980: p. 113.

are built, operation and maintenance are a comparatively minor expense. The Congressional Budget Office (CBO) recently concluded that the freight energy efficiency of unit coal trains was 890 Btu's per ton-mile of cargo compared to 1270 for coal pipeline. 10/ CBO did note parenthetically that policy considerations other than strictly energy ones would play a part in setting transportation policy.

Quite apart from the energy efficiency of rail compared to pipelines, however, are the actual charges for either service. A utility is more concerned with the cost of transportation than its relative efficiency, and here the debate was strewn with reported episodes of steeply rising rail rates. Because the costs of transporting coal sometimes exceed the cost of the coal itself, the cost of moving the coal can be a major component in the final cost of electricity. Frequent allusion was made to the experience of the city of San Antonio which, in the mid-1970s, had been quoted by Burlington Northern a coal haulage rate of $7.90/ton to transport coal to San Antonio from the Powder River Basin in Wyoming. When it came time to finalize the tariff, Burlington Northern raised its quotation to $11.09. After San Antonio appealed the case to the ICC, the rate was set at $10.93, but it has increased steadily in the intervening years to over $26/ton. 11/

Also noted during Congressional hearings were the experiences of Central Power and Light Company (Corpus Christi, Texas), and the Tampa Electric Company, which found it less expensive to import coal from abroad than to transport it across the United States. CP&L has imported coal from Africa; TECO has imported coal from Poland. 12/

10/ U.S. Congress. Congressional Budget Office. Energy Use in Freight Transportation. February 1982. These calculations included energy consumed in manufacture and maintenance of the facility in addition to the actual energy consumed in propulsion.

11/ For an accounting of the San Antonio experience, see the testimony of Lisa Cockrell, Trustee, City Public Service Board, San Antonio, Texas, in: U.S. Congress. Senate. Committee on Energy and Natural Resouces. Coal Utilization and Distribution Act of 1981. Hearings on S. 1844. May 10 and June 8, 1982: p. 306 et seq.

12/ U.S. Congress. House. Committee on Public Works and Transportation. Subcommittee on Surface Transportation. Coal Pipeline Act. Hearings on H.R. 4230. December 8 and 9, 1981: p. 323-6.

Opponents of coal pipelines argue that savings, if any, in transportation costs from coal pipelines will not be passed along to consumers. Indeed, the Administration's opposition to the eminent domain legislation is believed to have been premised, in part, upon the opinion of the Council of Economic Advisors that the savings in reduced transportation costs for coal would accrue to coal producers, and not to consumers. 13/

The coal industry sharply challenged this assertion, which it says is based on the "Btu price parity" theory--that is, that one fuel is priced by the price of competing fuels in the marketplace. The National Coal Association argues that the price of coal is determined at the end-use market, by the price at which other coal producers can provide coal to that same market, and not by the price of natural gas and oil. 14/ The effect of coal pipelines on rail rate and the ultimate effect on the cost of electricity to consumers would vary in every market setting, according to the NCA.

The Water Issue

Of even greater complexity than the economics of coal pipelines has been the debate over associated water issues. Opponents of slurry pipelines expressed grave concern about the demands which the pipelines would place on scarce water resources, and the disposal of used slurry water after its separation from the delivered coal.

The 97th Congress went to considerable pains in the language of S. 1844 and H.R. 4230 to preserve the right of the States to determine the purposes to which State water inadequate to resolve a number of uncertainties.

Throwing into doubt the adequacy of the legislative language was the ruling of the Supreme Court in Sporhase v. Nebraska in the summer of 1982. To ensure adequate supplies of water for their own citizens, a number of States have enacted statutes prohibiting or limiting interstate transfer of water. The Court ruled that water was an article of interstate commerce and struck down one provision of the Nebraska statute.

The Constitution grants Congress the authority to regulate interstate commerce or to permit the States the

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13/ Ibid., p. 88.

14/ U.S. Congrss. House Committee on International Insular Affairs. Coal Pipeline Act of 1981. Hearings on H.R. 4230. July 30 and November 17, 1981, 1981: p. 133-134.

authority to regulate articles of interstate commerce. The Court determined, however, that Congress had not granted permission to the States to engage in groundwater regulation, which placed an impermissible burden of interstate commerce. The Court ruled that State restrictions on water use or interstate transfers would be permissible if it could be demonstrated that they supported legitimate State waterpolicy objectives. The ruling casts into doubt the validity of a number of current State statutes, and shook confindence in the protection of State water laws in the coal slurry bills. 15/

A number of States downstream from major sources of water also opposed the legislation, arguing that of water use by the State of origin would mean less for them. This issue centered about an agreement reached between one pipeline project (ETSI), which needed the water for its coal slurry pipeline and the State of South Dakota, granting ETSI a water appropriation from the Oahe Reservoir in return for an annual fee and additional compensation. Although pipeline opponents concede that the volume of water diverted by ETSI would not have an appreciable downstream impact, they fear that other interbasin transfers could have substantial effects.

In the instance of the Black Mesa generating station, slurry water is used in part for cooling, with some wastewater discharged into evaporation ponds; under terms of a treaty with Mexico, no waste water can be discharged into the Corolado River. This is what is termed a "closed" system.

There has been some experimentation with combustion of coal-water mixtures. However, at most installations that would be served by coal pipelines, particularly in more moderate climates, some water would be discharged. There appears to be sufficient technical evidence that slurry water can be returned to source-quality standards

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15/ The decision of the court was rendered on July 2, 1982. See hearings before the Subcommittee on Water Resources of the Senate Committee on Environment and Public Works, September 15, 1982: to be published. At those hearings, Carol Dinkins of the Justice Deparment thought that the Senate committee report language made the intention of the legislative language clear, and that the Court would probably "pay close heed" to the intention of the Committee. See also: Pamela Baldwin. U.S. Library of Congress. Congressional Research Service. Sporhase v. Nebraska July 27, 1982. Legal briefs filed in the case appear in the Senate Committee on Energy and Natural Resources hearings cited earlier of May 10 and June 8, 1982: p. 555-649.

or burned in limited percentages. Whether or not the cost of doing so significantly alters the economics of coal pipelines is subject to differing opinions. The ETSI pipeline is the only pipeline project nearing construction; it would carry coal from Wyoming to utility and industrial terminals in the South. The project managers anticipate no problem in complying with Federal, State, and local pollution control laws in order to secure wastewater discharge permits. 16/

Other Issues: Capacity, Employment, Common Carrier Status

Whether or not existing rail systems could support future coal transport needs did not appear to be a major issue in the slurry debate. One 1978 study suggested that the ability of the railroads to do so would be a function of capital more than anything else. 17/ A later study (1980) conducted by the Department of Transportation observed that the addition of coal pipelines would provide "another option to insure that the overall distribution system expands efficiently." 18/

One projection is that, were all the proposed coal slurry pipelines constructed, they would move between 5-9 percent of the total coal to be transported by 1990. 19/ Supporters of coal pipelines argue that this is a fairly modest volume, hardly capable of mortally crippling the railroad industry. Aggregating capacity statistics

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16/ For some discussion of water quality issues associated with coal slurry pipelines, see testimony of Dr. David G. Stephan, Director of the Industrial Environmental Research Laboratory, Environmental Protection Agency, appearing in: U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Transportation and Commerce. August 28, 1980: p. 79-83. See also: U.S. Environmental Protection Agency. Industrial Environmental Research Laboratory. Environmental and Pollution Aspects of Coal Slurry Pipeline. March 1979. EPA-600/2-79-067.

17/ U.S. Department of Transportation. Coal Transportation Task Force. Transporting the Nation's Coal: A Preliminary Assessment. Report to the Secretary of Transprotation. Washington, D.C. January 1978.

18/ U.S. Departments of Transportation and Energy. Nation Energy Transportation Study. A Preliminary Report to the President by the Secretary of Transportation and the Secretary of Energy. July 1980: p. 78-79.

19/ U.S. Department of Energy. The Potential Energy and Economic Impacts of Coal Slurry Pipelines. Prepared under contract by ICF, Inc. January 1980.

(or averaging railroad coal haul rates, for that matter) is probably misleading. The availablity of additional rail and pipeline capacity will probably have significant regional effects, with respect to both the volume of coal to be moved and the rate per ton for doing so. The railroads argue that the diversion of coal traffic to pipelines would cost thousands of jobs and capital needed to maintain the railroads. The pipelines countered that construction of the pipelines would create jobs. The numbers profferred by both sides were estimates at best.

A more sophisticated issue in the debate concerned the "common carrier" status of the pipelines. While railroad coal-haul rates are an issue, access to the rails is not. Railroads are "common carriers," meaning that they are required to provide service at nondiscriminatory prices to those who seek it. Though the proposed eminent domain legislation would have conferred common-carrier status on coal pipelines, opponents argue that a coal pipeline--because its physical capacity is fixed--cannot be a true common carrier. The legislation proposed in the House established two classes of shippers: the original supporters of the pipeline project, and those who applied for any excess capacity on the basis of "first come-first served". Opponents contended that the distinction was meaningless because the pipeline owner would often be either the producer of the coal itself or a consortium of utilities at the pipeline terminals, both of whom would plan the capacity of the pipeline to serve their needs. Though the pipelines campaigned for competition, the railroads argued that the pipelines would not be competitive because they would not be true common carriers accessible to all.

Prospects in the 98th Congress

Coal pipeline legislation fared better in both Houses during the 97th Congress than ever before, and the legislation itself approached a new level of sophistication and refinement. As it is likely that the legislation would have come to a vote in the 97th had it not been for a crowded agenda, it is very likely that the 98th Congress will take up the matter as unfinished business.

With what result? There is little reason to suppose that the legislation will be significantly less contentious in the 98th Congress than in the 97th; it may even be more so. Its disposition is almost impossible to predict. Despite the Administration's stated opposition to the legislation, there was some speculation in the late summer of 1982 that the President, although he would not encourage its passage, would sign the bill if it were it presented to him. In part, this was because the construction of coal pipelines was perceived by officials at the Departments of

State and Commerce as a means of compensating for employment and equipment sales lost to the ban imposed by the Administration on the Soviet gas pipeline. 18/ Even though that ban has since been removed, it is possible that high unemployment or low industrial output could dissuade the President from vetoing the measure if the Congressional will seem strong.

18/ Inside Energy, August 6, 1982: p. 3-4.

Oil Pipeline Deregulation*

BACKGROUND

Federal regulation of oil pipelines began in 1906 with passage of the Hepburn Act, which was designed to prevent monopolistic practices by pipelines. Since then, additional laws and regulations have been added, although the regulatory burden for oil pipelines is not as large as it is for natural gas pipelines or for public transportation.

The oil pipeline companies contend that they are competitive with each other and with other modes of transportation and that this competition is sufficient to prevent "captive" situations where rates would be unfairly high. The companies claim that they should no longer be subject to price or rate regulation by the Federal Energy Regulatory Commission (FERC), except for the provisions of the Interstate Commerce Commission (ICC) prohibiting discrimination among shippers. They maintain that since the transfer of authority over the industry from ICC to FERC, there have been continuous attempts to characterize them as natural monopolies and to subject them to cost-of-service pricing and other aspects of public utility regulation.

An attempt to deal with the problem without legislation was behind a decision by the FERC to scrap the traditional rule-of-thumb used in setting rates, used first by the ICC and then by the FERC after it was created in 1977. This policy will mean that oil pipeline rates will be set on a case-by-case basis and will include a variety of criteria. As a result, no oil pipeline rate filing is to be suspended or investigated unless someone outside the commission requests the action.

Despite the FERC action, considerable interest remains in legislative, rather than executive, deregulation. The oil pipeline companies are concerned that the regulatory commissions may change their minds in the future and could still impose new regulations under the existing law. They contend, therefore, that permanent relief from regulations is necessary to allow the pipeline companies the assurance that they need to plan and to invest in new projects. They claim that individual special cases would still be subject to review under the Interstate Commerce Act so that discrimination or artificially high tariffs would not be tolerated in an unregulated environment any more than it is under the current regulations.

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*By David Lindahl, Environment and Natural Resouces Policy Division.

Opposition to oil pipeline deregulation has come mostly from independent refiners. Farm cooperatives in particular, many of which operate their own refineries, are concerned that they would be financially disadvantaged by the higher rates that deregulation might make possible. Some of their refineries are served by only one pipeline and do not have ready access to other modes that might compete with the pipeline. The cooperatives complain that this could lead to excessive rates and that, even if a new pipeline were built to serve captive shippers, it would be more costly to build than was the existing line. As a result, they believe that the tariff on the new line would have to be higher than on the existing line and as such it would not be a restraining force on tariff increases by the older pipeline. The independent refiners, including the cooperatives, are concerned that even a small increase of a few cents per barrel in pipeline rates would be difficulty, if not impossible, for their depressed industry to pass on in a glutted market. They maintain that shipperowners already have a distinct competitive advantage in that a portion of the tariff is returned to them in the form of dividends. The independent refiners argue that regulation of oil pipelines had not been very effective over the years, but that the answer is better enforcement and reform.

The Departments of Justice and Energy are not in full agreement on the subject of oil pipeline deregulation. The Justice Department supports general and complete deregulation with very limited authority for continued or renewed regulation of a few pipeline systems. According to Justice, pipelines should be required to prove, however, that their decontrol would not create a monopoly. The Energy Department suggests that the burden of proof should be on the pipelines' customers. FERC has noted that pipeline regulation was never intended to be "consumer" protection but was "producer" protection. All three of the Federal agencies have expressed some concern that deregulation could raise questions under the Sherman and Clayton Acts about the structure of certain pipelines which are overlapping joint ventures. The consensus, however, appears to be that those problems, if they should arise, could be handled individually. Consequently, the Administration position is generally supportive of deregulation but not of any specific bill.

LEGISLATIVE INITIATIVES

Representative Mike Synar introduced H.R. 4488, an amendment to the Department of Energy Organization Act, which would have transferred from the Secretary of Energy to the FERC functions relating to the transportation of oil by pipelines. FERC's authority to determine rates for oil pipeline transportation, however, would be limited to the Trans Alaska Pipeline. This, in effect, would have automatically deregulated all of the other domestic oil pipelines. Hearings were held by the House Energy and Commerce Subcommittee on Fossil and Synthetic Fuels on May 21 and September 29, 1982.

Another major deregulation bill (H.R. 6815) was introduced by Representative John Breaux. The Oil Pipeline Regulatory Reform Act of 1982, which would have amended the Department of Energy Organization Act to repeal provisions transferring to the Secretary of Energy or the Federal Energy Regulatory Commission certain functions of the Interstate Commerce Commission (ICC) or the Chairman relating to the transportation of oil by pipeline. It would have transferred to the Federal Energy Regulatory Commission such functions relating to the transportation of oil by pipeline as were carried out by the Secretary of Energy or the ICC before enactment. It would have amended the Interstate Commerce Act to delete provisions requiring common carriers to establish just and reasonable rates, fares, and charges. It would also have deleted provisions: (1) requiring the ICC to investigate forthwith the lawfulness of a rate, fare, or charge upon the filing of a petition by a concerned carrier; and (2) empowering the ICC to issue cease-and-desist orders regarding rates, fares, and charges. It would have repealed provisions requirings the ICC to establish just divisions of joint fares, rates, or charges and would have prohibited any State or interstate agency from reviewing, prescribing, suspending, or regulating the rates or charges of any common carrier for transportation of oil by pipeline in interstate commerce.

In the Senate, a bill (S. 1626) introduced by Senator Don Nickles was very similar to H.R. 4488 in that it would have transferred the authority to determine oil pipeline rates from the Department of Energy to the FERC and would have limited that authority solely to the Trans Alaskan Pipeline. This would have resulted in complete deregulation except for that one special case. On May 21, 1982 the Seante Commerce Subcommitee on Energy Regulation held hearings. These were followed by Commerce Committee hearings on Septemer 29, 1982.

PROSPECTS AND PENDING ISSUES

It was apparent during the 97th Congress that most members were unfamiliar with the issue of oil pipeline deregulation and that passage was not likely during that Congress. It is widely expected, however, that this will be a major issue in the 98th Congress and that action on one or more of these legislative initiatives, when reintroduced, is highly likely. The recent trends toward deregulation in other industries are largely the result of the favorable attitude of the Executive Branch and to a lesser extent the Congress. A continuance of this trend will make this a prominent issue in the 98th Congress.

Gas Pipeline Deregulation*

BACKGROUND

The Natural Gas Policy Act (P.L. 95-621) provides for the elimination, as of January 1, 1985, of price ceilings for gas from wells drilled on or after February 19, 1977 (New gas). This provision of the act has stirred up considerable discussion. Some groups would like to see wellhead price deregulation at an earlier date, some at a later date. Some would like to have all gas deregulated rather than just new gas, and some would prefer that none be deregulated.

Assuming that the producing sector of the gas industry is deregulated at some point, there will be a substantial impact on the pipeline sector. The latter, serving as a bridge between deregulated producer and a regulated distributor, may find itself "squeezed." Early in the deregulation atmosphere, however, both the producer and the pipeline are protected from the signals of the market place by the terms of the various contracts now in existtence. On the producing side, these often require price escalation based on some index such as average oil price, or the highest price paid for gas in a field, etc. In addition, there are take-or-pay clauses usually requiring the pipeline to take at least 70-90 percent of the contract volume or to pay for the gas not taken. On the distribution side, the minimum take is often 50 percent. FERC permits the passthrough of gas prices to distributors on a rolled-in basis while many State commissions permit the passthrough of these costs to the ultimate customer. As gas demand declines in response to higher prices, the pipelines may find themselves paying high prices for gas they cannot take, while State commissions prevent the passthrough of such costs. Alternatively, if such costs can be passed through, the line may shut in low-cost gas with a more advantageous take-or-pay requirement by taking the higher price gas which can be immediately passed on to its ratepayers. This will cause more rapid escalation of gas prices and a further eventual decline in demand.

Thus, wellhead decontrol raises fundamental questions about the structure, operation and regulation of the gas industry. For example, can the industry operate with one sector deregulated and two regulated as utilities? Is some other system of regulation required for the pipeline?

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*By Alvin Kaufman and Karen Nelson, Senior Specialists Division.

LEGISLATION ENACTED

No legislation was completed in the 97th Congress, but the Subcommittee on Fossil and Synthetic Fuels of the Committee on Energy and Commerce, House of Representatives, held a number of hearings in an effort to delineate the issues. Testimony was received from gas distributors, interstate pipelines and producers.

The distributors noted that action was required in regard to indefinite price escalator and take-or-pay clauses in many current contracts. These will exacerbate a bad situation when prices are deregulated. As average gas prices increase at the burner tip, load loss is being experienced. In the period from January through May 1982, the AGA estimated the fuel-switching loss at an average 226 billion cubic feet. This has occurred because oil prices are 5-15 percent lower than gas prices. Despite this shrinkage in the market, and the apparent surplus of gas, the wellhead cost of gas has continued to increase contrary to market signals. The barriers to transmitting these market signals to pipelines and producers were termed formidable by the distributors.

The Interstate Natural Gas Association of America, representing pipelines carrying 90 percent of the natural gas transported and sold in interstate commerce noted that fuel switching was occurring in many market areas. Several pipelines emphasized this problem. The bulk of the pipeline testimony, however, dealt with the issue of whether both old and new gas prices should be deregulated, or just new gas. Some of the lines did not note that there were contractual problems. Transco Energy Company indicated these could be handled by including a mandatory market-out provision applicable to existing contracts in any price decontrol legislation.

Producer testimony dealt primarily with the impact of price on reserves, although most of the producers indicated they were renegotiating prices with the pipelines. The Domestic Petroleum Council stated that many pipelines are negotiating market out clauses for existing contracts. They also maintained that present market conditions are forcing producers and pipelines to renegotiate take-or-pay clauses.

It was apparent from the testimony that all parties agreed there was a marketing problem. The distributors felt the pipelines and producers were insulated from the problems, while the producers felt they were responding to the problem. The pipelines varied in their response depending on their individual situation.

LEGISLATIVE INITIATIVES

A number of bills were introduced that addressed the perceived problems in regard to gas pipelines. These fell into two classes: (1) Those that dealt with the contract problem by declaring certain clauses unenforceable (H.R. 5645, 5646); and (2) those that would have restricted the cost pass-through in some way (H.R. 6531, 6850, 7122, 7251, 7243, 7264, S. 3028). The latter appeared to be the most popular approach. None of the bills introduced addressed the problem of pipeline regulation.

MAJOR REPORTS AND STUDIES

The House Subcommittee on Fossil and Synthetic Fuels of the Committee on Energy and Commerce issued a major study of natural gas regulation. 1/ The study reviewed the structure and performance of the industry, regulatory concepts and practices, and State regulation of distribution. The study also raised several issues whose resolution is required if Federal wellhead decontrol is to be successful. These were defined as: (1) resolution of the contract dilemma; (2) the legal effect of vacating wellhead regulation on State regulation; (3) the appropriate form and content of Federal pipeline regulation. It also noted that the gas situation is further complicated by the provisions of existing contracts which tend to protect the financial viability of the producer and pipeline, but leave the distributor exposed to the market.

In the event the regulatory regime were changed, questions would arise over how low-load-factor customers would be treated and over what would happen to transportation prices and to the obligation to serve. The regulation options considered were utility regulation as at present, deregulation, common-carrier regulation, and a hybrid-utility/common-carrier system. It was concluded that deregulation was not an acceptable option, but that any of the regulatory concepts could meet the standard criteria if appropriate modifications are made.

1/ CRS and National Regulatory Research Institute for the Subcommittee on Fossil and Synthetic Fuels, Committee on Energy and Commerce, U.S. House of Representatives. Natural Gas Regulation Study. July 1982, Committee Print 97-GG.

PROSPECTS AND PENDING ISSUES

In the short-term future (two years) the Congress will be confronted with the contract issue. In the longer term it may have to confront the issue of pipeline regulation when the wellhead is deregulated. The prospects for regulatory change are not a likely possibility in the short term. It is probable that the contract situation may correct itself through negotiation between the involved parties. If not, some form of Congressional action is a distinct possiblity.

CHAPTER IV. ELECTRIC UTILITY AND NUCLEAR POLICY

Introduction*

RECESSION, INTEREST RATES, SALES

The economic events of 1981 and 1982 bore especially heavily on the electric utility and industry. The most obvious measure, electricity production, grew an anemic 0.5 percent in 1981, with many parts of the country, including the power-dependent Central Industrial region, consuming less than the previous year. The next year was even worse for the utilities with national sales actually declining more than two percent: the first such decline since 1938. Once again, the Central Industrial region was a significant loser, producing 4.8 percent less power than in 1981.

In addition to poor sales, utilities faced continued high interest rates. As the most capital-intensive industry, electric utilities are especially sensitive to the cost of money--particularly the cost of money to build new generating capacity at a time when demand is actually falling. The long lead times that have become typical in constructing new powerplants compound the expense of borrowing money to pay for the construction, to the extent that the estimated cost of building a plant can be two or three times the actual cost of construction, with the balance being the cost of the money to pay for it.

The effect of these conditions was to invalidate the construction programs of most utilities. Many decisions to build new generating capacity were made in the pre-embargo years when load was growing at rates of seven percent and higher. New construction made no sense when, with the single exception of 1976, increases had not even come close to that rate for eight years, and when sales were actually falling. A utility that anticipated a seven percent growth rate needed to add 40 percent to its generating capacity in five years. At two percent growth, that additional capacity would not be needed for 17 years. Plants ordered in the early 1970s, to come on line before 1980, now would not be needed until the 1990s.

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*By Carl E. Behrens, Environment and Natural Resources Policy Division.

For some utilities, with much of their capacity using now-expensive oil or scarce natural gas, construction of new baseload coal or nuclear units had some advantages even if load did not grow to meet them. These utilities continued their construction programs--at a slower pace to be sure--both in the hope that demand would pick up, and that even if it didn't, the power produced by the new units would be cheaper than the oil-fired generation they currently depended on.

As the demand continued to stagnate, and inflation and high interest rates--as well as the cost of meeting new safety requirements for nuclear plants following the Three Mile Island accident--drove up the cost of new construction, more and more projects were deferred indefinitely, and not a few were cancelled. Most of these projects were nuclear plants: 6 nuclear units were cancelled in 1981, and 18 more in 1982. And, starting in 1981, for the first time projects were cancelled on which substantial amounts had already been invested. Utilities faced with the choice of losing hundreds of millions of dollars, or continuing to fund projects for which they could not expect a return for another decade, opted to cut their losses. The phenomenon posed an increasingly difficult problem for utility commissions: how much of those losses should be passed through to the ratepayers, and how much should be absorbed by the utility and its investors?

NUCLEAR POLICY

After four years of being treated as the energy source of "last resort" by President Carter, nuclear power gained a stronger supporter in the Reagan Administration, which regarded it as a potentially large and long-term contributor to the national energy mix.

President Carter looked on uranium as an important fuel in the near term, but viewed it as a transition to long-term renewable energy sources. The Reagan Administration, however, considered fission an "essentially inexhaustible energy supply," and President Reagan, in a policy statement October 8, 1981, termed it "one of the best potential sources of new electrical energy supplies in the coming decades."

Nuclear power had another advantage during 1981 and 1982, besides the advent of a sympathetic Administration: there were no major accidents such as the 1979 Three Mile Island accident which so strongly affected public acceptance of the nuclear option. These advantages, however, not enough to overcome the economic difficulties of utilities during this period.

Administration Policy

The Reagan nuclear policy was based on the view that uranium would be a major and enduring source of energy. For the long term, development and demonstration of breeder reactor technology, deferred and deemphasized by the Carter Administration, was considered central. Specifically, the Clinch River Breeder Reactor Project, which President Carter had unsuccessfully tried to cancel, was revived in the Reagan budget proposals.

In the near term, the Reagan policy statement argued that potential of nuclear power was not being realized because it had become "entangled in a morass of regulations that do not enhance safety," and because the Government had not developed an "acceptable system for commercial waste disposal." He directed the Secretary of Energy to recommend nuclear licensing reforms, and pledged an accelerated waste disposal program.

The President noted that efforts directed narrowly at helping nuclear power, such as regulatory reform, "will be of little use if the utility sector cannot raise the capital necessary to fund construction of new generating facilities." Economic recovery, he said, was essential to further construction, and he pointed to the budget and tax bills passed during the First Session of the 97th Congress as steps in that direction.

However, as already noted, the economic recovery that the President had identified as essential did not come. As the 97th Congress drew to a close, the state of nuclear power, and the electric utility industry in general, was hardly less precarious than at the beginning two years earlier.

Electric Utility Legislation*

BACKGROUND

The 97th Congress, concerned with the battle over the budget and the general economic policy-making of the new Administration, paid relatively little attention to the state of the utility industry. The only major legislation affecting electric power, besides the various bills concerning nuclear power that are discussed separately, was a repeal of the "off-gas" provision of the Fuel Use Act, and provisions in the two major tax bills passed by the 97th Congress. 1/

LEGISLATION ENACTED

Fuel Use Act Amendments

The use of oil and gas to generate electricity was the object of continuing legislative attention in the post-embargo years. The Powerplant and Industrial Fuel Use Act of 1978 (P.L. 95-620), passed as part of the National Energy Act by the 95th Congress, prohibited the use of oil or gas in new generating facilities or major industrial burners, and authorized the Secretary of Energy to prohibit the use of oil in existing facilities that he found capable of burning an alternative fuel. It also prohibited the use of gas in existing generating facilities after 1990---a provision that some utilities found particularly bothersome. Particularly in the West South Central region, in States where gas was produced and was unregulated, utilities started the decade with virtually all their generating capacity dependent on gas. These utilities started constructing coal-fired generating capacity after the embargo and the gas shortages of the middle 1970's, but gas continued to be an important fuel into the 1980's. In 1982, for example, gas was used to produce 60 percent of the electricity generated in Texas, with coal producing essentially all the rest.

In the 96th Congress, the Carter Administration proposed legislation that would speed up the prohibition process and make grants to utilities that were ordered to

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1/ See Chapter IV

convert oil-burning plants to burn coal. The bill passed the Senate, but not without an amendment that significantly eased the 1990 "off-gas" provision. The House did not vote on the measure. Opposition to the bill centered mostly on the program of grants to utilities, but the amendment to the off-gas provision drew fire from the coal industry, which had been one of the bill's strongest supporters. Coal industry witnesses argued that without the prohibition on the use of gas, utilities would slow down their construction of coal-capable generating stations. The utilities denied that accusation. They complained that even with the current construction programs there would not be enough coal capacity to meet all the system needs in 1990, and that if they could not burn gas they would be forced to use oil in those facilities that could burn either oil or gas.

That argument continued to influence legislators in the 97th Congress, and numerous bills were introduced to repeal or amend the off-gas provision for existing plants, contained in Section 301 of the Fuel Use Act. At the same time, utilities that were in the process of converting coal-capable plants from burning oil were concerned because the Administration's proposed budget for DOE contained no funding for the agency that issued prohibition orders under FUA and ESECA. Such an order exempts the utility from having to meet New Source Performance Standards under the Clean Air Act, requiring only compatibility with the less stringent State Implementation Plans.

The goal of removing the off-gas provision while maintaining the authority to issue prohibition orders for Clean-Air-Act purposes was achieved by an amendment to the Omnibus Budget Reconciliation Act of 1981 (H.R. 3982, P.L. 97-35). The amendment repealed the prohibitions and prohibition authority for the use of oil or gas in existing facilities, as contained in Section 301. A new Section 301 was substituted, providing for a voluntary certification by the utility that a unit was coal-capable, and giving DOE authority to issue a prohibition order for such certified units. Funding for DOE was specifically provided for issuing prohibition orders in the FY83 Appropriations Act for Interior and Related Agencies (H.R. 7356, P.L. 97-394).

LEGISLATIVE INITIATIVES

A number of legislative proposals affecting electric utilities received attention during the 97th Congress. Some of these are discussed elsewhere: proposed amendments to the Clean Air and Clean Water Acts (Chapter VIII); legislation dealing with hydroelectric power, with the Holding Company Act, and with utility regulation (later in this Chapter),and energy conservation legislation (Chapter VII). The Congress was also concerned about the financial effects of nuclear powerplant cancellations, particularly the cancellation of the Washington Public Power Supply System's WNP-4 and 5 plants, in which some $2.5 billion had been invested. Oversight of the situation at WPPSS came largely in the context of Congressional involvement with the Federal Bonneville Power Administration, which had played an indirect but important role in the decision to build, and to cancel, those plants. In addition, two bills were introduced: Representative Weaver submitted H.R. 6805, to require voter approval of further financing of WNP-1,-2, and -3, and Senator McClure introduced S. 2992, to allow electric power consumers a tax deduction for increases in rates attributable to the failure to complete a nuclear power plant. No hearings were held on either bill.

PROSPECTS AND PENDING ISSUES

As in other energy areas, the trend during the 97th Congress was toward a lesser Federal role in the electric utility sector, and this approach is likely to continue in the next two years. Nevertheless, the continued financial difficulties of many utilities, particularly those with on-going construction projects, could attract Congressional attention, both of oversight and of regulatory or financial legislation.

Electric Utility Deregulation and Diversification*

DEREGULATION

Recent changes in the structure of the electric utility industry have prompted a questioning of the need for continued regulation of electric utilities. Interest in deregulating the electric power industry has been building as it seems apparent to most industry members that the current regulatory system is not meeting the needs of the utilities. Current regulation is being criticized for not providing economy and efficiency incentives and for not allowing for earnings that are commensurate with risk. Deregulation is believed by some to hold the key to a healthier industry and to improved service. The economic rationale behind utility regulation and the effects deregulation would have on utilities, not to mention the political implications of such a measure, provide the background for a highly controversial issue.

The perceived benefits to utilities from deregulation include improved efficiency stemming from the introduction of competition, lower long-term electric rates, improved financial positions as a result of lower costs, and improved reliability.

Those opposed to deregulation perceive a number of difficulties in moving to a deregulated industry. The problem of coordinating the entities within the industry under deregulation could result in higher costs as utilities would be free to increase costs and consumers would have no real protection. In addition, reliability problems may arise because there would be no one source of responsibility and coordination to assure adequacy of service. Long-term contracts would be necessary in order to guarantee supplies, making actual competition nonexistent. There may also be difficulties in finding investors to take on the high risks of constructing expensive new power plants with no guarantee of a market.

The political and legal implications of implementing deregulation may be insurmountable because it would involve amending State and Federal laws and requiring State regulators to relinquish their present authority over the utilities, which they would most likely be unwilling to do. State opposition to deregulation was evidenced recently when the National Governors' Association and the Indiana Public Service Commission opposed a limited DOE proposal that electric utilities be allowed to choose between State and Federal regulation of their bulk-power production.

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DOE's recommendations on utility regulation center in part on decentralizing the regulation of wholesale electric rates, which would probably entail either regional regulation of wholesale rates or giving States greater authority in selected areas. FERC is presently proposing an experiment in utility deregulation which would develop a competitive market for certain bulk-power transactions, applying at first to only certain coordination transactions between integrated, nonaffiliated utilities. As proposed, the participating utilities would agree to wheel power at fixed, standard, and nondiscriminatory rates. These services would also be extended to small power producers and cogenerators. Howard Perry, a DOE policy advisor, has proposed limited deregulation of generation through modification of the Federal Power Act to exempt "new capacity built expressly for interstate sales." He also proposed possible deregulation of bulk-power transactions between or among utilities. Perry's scenario could substantially increase the authority of State governments by devolving much of FERC's present jurisdiction over the electric industry.

The problems perceived in deregulating the entire electric power industry may result in a less drastic reform of the regulatory system. Alternatives to total or partial deregulation may be a regional type of regulatory scheme, but such a reform would also meet with political as well as legal obstacles. The National Governors' Association has proposed a plan that calls for multistate "cooperative planning" relating to electricity supply. The plan would not involve regional regulation, but would allow utility planning and perhaps power purchases and plant construction and operation on a multi-state level.

DIVERSIFICATION

As a way to improve their financial health, many of the utility companies, as well as the Administration, feel the utilities should be freed from SEC regulation of utility holding companies through the repeal of the Public Utility Holding Company Act (PUHCA) of 1938. Proponents of repreal feel the Act hinders the diversification activity of utilities, and thus, one way of improving their financial picture. Opponents argue, however, that the possible benefits of diversification for utility financial health are questionable and the risks of venturing into a business in which the utility has little experience may be great.

PUHCA was enacted to control the pyramiding of utility holding companies, a practice common during the early part of the century. It is argued that the industry structure has changed dramatically since then and the Act is no longer appropriate for the current environment.

Debate centers around the perceived effects of diversification. The level of risk the utility takes on by diversifying is considered high by some, and not significant relative to the benefits, say others. Much of the risk has to do with the utility's inexperience in order fields. A central question in the debate is the proper role for utilities--should they be engaging in activities other than the provision of electric power as they were originally intended? There may also be problems in separating all the operations of the unregulated entity from those of the regulated. Finally, if utilities are freely allowed to diversify, a central issue is how to regulate the diversified utility, since a normally unregulated business into which a utility may venture will likely have an effect on the regulated utility, and vice versa.

Two organizations which have been intensely involved in the diversification issue are the National Association of Regulatory Utility Commissioners (NARUC) and the Wisconsin Public Service Commission. NARUC is generally not in favor of diversification, believing it acceptable only under certain circumstances and then only with closer regulatory scrutiny. The Wisconsin PSC has been trying to develop a set of rules governing utility diversification activity, but has been unable in the past year to build a consensus among law-makers and to settle conflicts among industry and consumers. The original, relatively stringent rules were redrafted to reflect a more favorable regulatory environment for diversification, but these faced a no-confidence vote in the legislature. The Commission anticipated that new rules would be drafted by the end of 1982, and in the interim, diversification requests were dealt with on a case-by-case basis.

The Federal Government is beginning to expand some of the limits of permissible diversification, but utility industry members are pushing for substantial amendment or repeal of the PUHCA, arguing that States will retain adequate control to protect utility rate-payers. The five-member SEC unanimously favors repeal of the Act, which the SEC administers. Thus, the issue facing the Congress is whether or not the repeal or modification of the PUHCA is in the public interest.

LEGISLATIVE INITIATIVES

The discussions relevant to deregulation and diversification have involved hearings on the amendment or repeal of PUHCA. Three bills--S. 1977 (Johnston), H.R. 5465 (Tauzin), and H.R. 6134 (Collins)--would repeal the PUHCA entirely. Other relevant bills would substantially amend the PUHCA. S. 1870 (D'Amato) and H.R. 5220 (Corcoran) would create additional categories of PUHCA exemptions and make it more difficult for the SEC to revoke an exemption. S. 1869 (D'Amato) would make certain changes in PUHCA that presently inhibit utility diversification. For example, this bill would permit utilities to hold certain nonfunctionally related businesses.

PROSPECTS AND PENDING ISSUES

Given the problems with the current regulatory system and the financial difficulties in the industry, regulatory reform--if not deregulation--will likely be one of the most important emerging utility issues before Congress. The reform/deregulation distinction will probably become central and the critical issue may be whether reform or partial deregulation is preferable. Since the deregulation issue is relatively new, the chances for significant legislation will be slight, but discussion in that direction should intensify dramatically. This will occur once the Administration releases its study and recommendations. Any federal preemption of State regulation is unlikely to occur as the Administration is likely to confirm State control over utility rates.

Further moves on amendments to PUHCA have not gone beyond the hearing stage and none of the proposed bills is likely to pass as the regulatory reform issue becomes dominant.

Breeder Reactor Research and Development*

BACKGROUND

Breeder reactors could generate as much as 60 times more electricity per pound of uranium than the reactors now in use (light water reactors--LWRs). For that reason, the development of breeder reactors has been a major objective of Federal nuclear research programs since the late 1960s. Breeder reactors, however, are a complex technology requiring considerable additional development before they can be commercialized. It would also be more costly to generate electricity from breeders than from LWRs unless uranium prices were considerably higher than they are today. In addition, there is concern that widespread use of breeder reactors could contribute to the proliferation of nuclear weapons. Hence, there is considerable controversy over whether or not breeder reactor development should proceed.

The central focus of debate over breeder reactors is the Clinch River Breeder Reactor (CRBR), a 350-megawatt demonstration plant to be built near Oak Ridge, Tennessee. President Carter opposed construction of CRBR. In each of his four years as President, Carter recommended cancellation of the project, but Congress (in some cases by narrow margins) continued to provide funding. The Reagan Administration supports the continuation of CRBR, but substantial opposition remains in Congress.

The standoff between President Carter and Congress on the CRBR project contributed to a substantial delay and cost increase for the project. In 1972 CRBR was estimated to cost $667 million and to begin operation in 1982. Now DOE estimates that the plant will cost $3.6 billion and begin operation in 1989.

LEGISLATION ENACTED

The only legislation directly concerning breeder reactor development during the 97th Congress was funding related legislation.

The final budget recommendation of the Carter Administration for FY82, included no funding for the Clinch River project and $459 million for research and development on breeder reactor systems. President Reagan, conversely, included $254 million for CRBR in his FY82 request, along with $461 million for other breeder programs. He also requested a $68 million supplemental appropriation for FY81 for the breeder program, including $50 million for CRBR.

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*By Robert L. Civiak, Science Policy Research Division

FY81 Supplemental Appropriation and Rescission

About $50 million in funding for CRBR for the last four months of FY81 were provided by the FY81 Supplemental Appropriation and Rescission Act (P.L. 97-12). That Act extended the provisions of the FY81 Further Continuing Appropriation Act (P.L. 96-536), which was to expire in June 1981. P.L. 96-536 had stipulated that funding for any authorized breeder reactor demonstration project would continue at the "current rate of operation", which at the time was about $13 million per month.

FY82 DOE Civilian Authorization/Omnibus Budget Reconciliation

During consideration of the FY82 DOE civilian research and development authorization bill (H.R. 3146), the House Science and Technology Committee voted 22-18 to deauthorize the CRBR project, despite the recommendation from the Subcommittee on Energy Research and Production that the project be funded at the Administration-requested level of $254 million. The full Committee (H. Rept. 97-94) recommended providing $44.5 million for termination costs for CRBR and increasing the Administration request for advanced breeder design studies by $15 million.

The version of the DOE authorization bill reported by the Senate Energy and Natural Resources Committee (S. Rept. 97-81 on S. 1021) included the Administration-requested funding level for CRBR.

The provisions for DOE civilian research and development programs reported by the authorization committees were included in the Omnibus Budget Reconciliation bills as reported by the budget committees in both Houses (H. Rept. 97-158 and S. Rept. 97-139). In the House, the Gramm-Latta amendment reversed the Budget Committee recommendation and H.R. 3982 included $230 million to proceed with Clinch River. The Senate passed the bill (S. 1377) without changing the recommended $254 million funding level for CRBR. The $230-million House figure was adopted by the Conference Committee (H. Rept. 97-208) and included in the final version of the Omnibus Reconiliation Act (P.L. 97-35), which took the place of an authorization act for DOE for FY82.

FY82 Energy and Wator Development Appropriation

The Energy and Water Development Appropriation bill as passed by the House on July 25, 1981 (H.R. 4144; H. Rept. 97-177) included $238 million for continuation of the Clinch River Breeder Reactor project. During debate on the bill, as amendment offered by Rep. Coughlin to delete all funding for CRBR was defeated by a vote of 186-206.

In the Senate, an amendment offered by Senators Bumpers and Humphrey as amended by Senator Tsongas, which would have limited funding for CRBR to $90 million, was tabled by a vote of 48-46. The Senate bill as passed on October 28, 1981 (S. Rept. 97-256) provided $180 million for Clinch River.

The Conference Committee report on the FY82 Energy and Water Development Bill (H. Rept. 97-345) specified $195 million for CRBR, and the act, as signed into law (P.L. 97-88), included that figure. A total of $687 million was appropriated for FY82 for breeder reactor systems.

FY83 Continuing Resolution

The continuing resolution signed into law October 2, 1982 (P.L. 97-276) appropriates funds until December 15, 1982 to Federal activities and projects for which regular FY83 appropriations bills have not been passed. In the case of breeder reactor programs, the continuing resolution provides that spending can proceed at the rate specified in the version of the FY83 Energy and Water Development Appropriation Bill as reported by the House Appropriations Committee (H. Rept. 97-850, see below). During consideration of the resolution in the Senate, an amendment submitted by Senators Humphrey and Bumpers prohibiting the use of funds for spending in connection with the Clinch River Breeder Reactor Project was defeated by a 48-49 vote.

Second Continuing Resolution for FY83

A second continuing resolution, P.L. 97-377, signed into law Dec. 21, 1982, provided funding for DOE programs for the rest of FY83 at the same level that they were funded in FY82. During consideration of this bill on Dec. 14, the House voted 217 to 196 to prohibit funding for CRBR for FY83, except for termination of the project. However, on Dec. 16, the Senate voted 49 to 48 (Congressional Record, daily edition: S15064) to remove the House prohibition on CRBR funding. The conference committee (H. Rept. 97-980) went along with the Senate in allowing funds for CRBR. However, the conference committee report specified that DOE should not "initiate construction of any permanent facility structures or place any additional major equipment orders" during FY83 and should vigorously explore proposals "that would reduce Federal budget requirements for the Clinch River project ... and secure greater participation from the private sector."

PROSPECTS AND PENDING ISSUES

Whether or not the Clinch River Breeder Reactor should be funded remains the major issue in breeder reactor development. Clinch River received funding for FY83 by the narrowest of margins. The prospects for supporters of CRBR to continue their last minute rescues of the project do not look good in the 98th Congress.

Uranium Enrichment*

BACKGROUND

Only 0.7 percent of the uranium found in nature is the fissionable isotope uranium-235 (U-235). The remaining 99.3 percent is U-238. Before uranium can be used to fuel most nuclear reactors, the U-235 content must be increased (enriched) to about 3 percent. Enrichment is a technically complex process that requires a large plant for economic operation.

The Department of Energy (DOE) supplies uranium enrichment services to domestic and foreign commercial users, on a cost-recovery basis, from plants that were originally built to enrich uranium for nuclear weapons purposes. The enrichment enterprise is about a $2 billion-per-year Federal activity.

Existing U.S. enrichment plants use a technique called gaseous diffusion, which consumes large amounts of electric power. A newer gas centrifuge technique requires only 5 percent as much electric power for operation as the diffusion process. DOE is building a Gas Centrifuge Enrichment Plant (GCEP) near Portsmouth, Ohio.

According to DOE, GCEP is needed to meet increasing demand for enriched uranium in the 1990s. Even if demand is low, DOE claims, GCEP would be justified as a replacement for the more expensive diffusion process. However, the General Accounting Office 1/ and the Congressional Research Service 2/ have both raised questions regarding the justification for GCEP.

GCEP was originally scheduled for completion in 1986, but because of budget delays and the reduced demand for enrichment, it is now scheduled for partial operation in 1989 and full operation in 1994. DOE estimates that the project will cost $7 billion. Whether or not funding should be continued for GCEP and at what level was the major issue regarding enrichment during the 97th Congress.

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*By Robert L. Civiak, Science Policy Research Division.

1/ U.S. General Accounting Office. Issues Concerning the Department of Energy's Justification for Building the Gas Centrifuge Enrichment Plant. Report no. EMD-82-88. [Washington] May 27, 1982. 35 p.

2/ U.S. Congress. Senate. Committee on Energy and Natural Resources. Uranium Enrichment. Committee Print. [Prepared by the Congressional Research Service.] 97th Congress, 2d Session. Washington, U.S. Govt. Print. Off., May 1982. 54 p. Publication No. 97-68.

At various times in the past, the possibility of privatization--selling or otherwise turning the enrichment enterprise over to private interests--has been considered. That idea was not under active consideration during the 97th Congress, but there were proposals to establish a revolving fund in the U.S. Treasury to finance enrichment activities. Different revolving-fund proposals would have removed enrichment funding from the annual appropriations process to varying degrees.

The 97th Congress also examined the price that DOE charges for enrichment services. Currently the the price is established under a mandate for "recovery of the Government's costs over a reasonable period of time" (P.L. 91-560). It has been proposed that DOE increase its price to account for items such as taxes, insurance, and return on equity that would be included in the price if enrichment services were provided by private concerns. That proposal is referred to as "fair-value pricing."

LEGISLATION ENACTED

FY82 Authorization

The FY82 authorization for the Department of Energy, including authorization for uranium enrichment services, was contained in the Omnibus Budget Reconciliation Act of 1981, P.L. 97-35. The act authorizes $1,805 million for uranium enrichment for FY82 and estimates enrichment revenues at $1,805 million. Within the funding for enrichment, $601 million is provided for GCEP to maintain the construction schedule for completion of the first two of eight buildings in 1989. The version first passed by the House included provisions for fair value pricing of enrichment. However, the Senate did not include fair-value pricing and it did not appear in the Act as passed and signed into law.

FY82 Appropriation

The FY82 Energy and Water Development Appropriation Act (P.L. 97-88), provides a total of $1,806 million for uranium enrichment activities, uranium resource assessments and advanced isotope-separation research and development. Enrichment revenues estimated at $1,805 million are used to offset spending on these three programs for a net appropriation of $1 million. The nominal appropriation for GCEP is $601 million, but DOE is instructed to cut $86 million from the total enrichment capital expenditure account of $739 million, which includes the $601 million for GCEP.

FY83 Appropriation

Action was not completed on the FY83 Energy and Water Development Appropriation bill (H.R. 7145). However, a continuing resolution signed into law October 2, 1982 (P.L. 97-276) provided for spending on uranium-enrichment programs to proceed until December 15, 1982 at the rate specified in the version of H.R. 7145 reported by the House Appropriations Committee (H. Rept. 97-850). That bill provides $1,949 million for uranium-enrichment activities, which is $18 million less than the Administration request. Enrichment revenues are estimated at $2,008 million, which is $25 million below the Administration revenue estimate. GCEP is provided with $600 million in the Appropriations Committee bill, which is $13 million below the Administration request, but sufficient to maintain the construction schedule leading to completion of the first two buildings in 1989.

LEGISLATIVE INITIATIVES

Three bills were submitted to the 97th Congress [H.R. 2144 (McEwen), H.R. 3378 (Lujan), and S. 350 (Glenn)] that would have established revolving funds to finance uranium enrichment operations. Under all three bills, the fund would have included revenues from the sale of enrichment services, proceeds of special bond issues, and any appropriations made by Congress. The bills differed in the amount of control over the enrichment activity retained by Congress.

The Energy Research and Production Subcommittee of the House Science and Technology Committee had scheduled a hearing in July 1981 on the proposed revolving fund but the hearing was cancelled after DOE withdrew its support from the idea.

PROSPECTS AND PENDING ISSUES

The future of the Gas Centrifuge Enrichment Plant and the possibility of renewed efforts to privatize enrichment appear to be the major enrichment related issues facing the 98th Congress.

About $2 billion of the $7 billion total cost of GCEP has been spent or committee for spending. However, Congress may yet take a close look at whether GCEP is needed to meet enrichment demand or whether it can reduce the cost of enrichment. A key factor in that issue may be the speed with which laser isotope separation (LIS) techniques can be developed. LIS has the potential to be considerably cheaper than either diffusion or centrifuge enrichment, but it is at an earlier stage of development. If LIS could be available by the mid 1990s the benefits of building GCEP might be in question.

The Reagan Administration is reportedly considering various alternate schemes for the structure of the enrichment enterprise, including privatization, a revolving fund for enrichment, or some kind of joint government/private entity for the supply of nuclear fuel cycle services including enrichment, reprocessing of spent fuel, and waste disposal. The Administration might wait until other nuclear initiatives such as waste disposal legislation and nuclear plant licensing reform are resolved before initiating a major legislative effort to change the structure of the enrichment enterprise.

Nuclear Safety and Licensing*

BACKGROUND

Two years after the accident at Three Mile Island, the Nuclear Regulatory Commission began turning its attention to the backlog of applications for licenses to operate new nuclear powerplants. During 1981 and 1982 NRC issued licenses for eight new plants to operate at full power. At the same time, a number of projects ran into serious licensing difficulties. Among them were the Marble Hill project in Indiana and the Zimmer plant in Ohio, both of which had to suspend construction for a period of time while safety and quality control questions were investigated by the NRC.

Most drastic was the Diablo Canyon project in California. Started in 1968 and originally scheduled for completion in 1974, the plant had to undergo major redesign after discovery of an active offshore geological fault nearby. By September 1981 the applicant, Pacific Gas and Electric Co., had made the necessary changes to the satisfaction of the NRC, which issued a low-power operating license. A few days later, however, PG&E notified the NRC of its discovery that it had been using the wrong diagrams in analyzing the plant's ability to withstand an earthquake on the offshore fault. NRC then suspended the low-power license, and required a design "reverification" which had not yet been completed by the end of 1982.

Other projects found difficulty in meeting new requirements for emergency planning that were instituted following the TMI accident. Particularly affected were the Indian Point 2 and 3 plants in upstate New York and the Shoreham project in Long Island. The Indian Point plants, which had been operating since 1973 and 1976, eventually won approval to continue operations, but Shoreham, although construction was virtually complete, had not gained approval by the end of the 97th Congress.

Two major decisions by the U.S. Court of Appeals for the District of Columbia also affected the nuclear licensing process. In one (Sholly v. NRC, issued November 1980), the Court ruled that the NRC is required to hold a hearing, if requested, before making any amendment to a plant's operating license, even if the agency were to find that the amendment involved "no significant hazards." Since the NRC receives about 400 requests for such amendments each year, most of them for minor adjustments in operating conditions or procedures, the potential need to hold a hearing on each one threatened to overwhelm the licensing process, and the court's action led to legislative reversal in the 97th Congress. The other decision, in January 1982, held that NRC could not approve restart of the undamaged TMI-1 reactor until it had made an environmental assessment of possible psychological effects on nearby residents.

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LEGISLATION COMPLETED

Funding for the Nuclear Regulatory Commission was relatively noncontroversial in the 97th Congress, but several licensing measures were included in the authorization bill for Fiscal 1983 and 1984 that delayed passage of that measure until the last days of the lame duck session. Among the licensing amendments was a reversal of the Sholly decision (see above) and a measure allowing NRC to issue a temporary low-power license before completion of public hearings. The temporary license provision appeared, at the beginning of the Congress, to be necessary to prevent delays in the startup of completed plants due to the backlog of licensing actions that had accumulated while NRC dealt with the aftermath of the TMI accident.

Appropriations

NRC's funding is included in the Energy and Water Appropriations bill and was thus hostage to the various controversies that surrounded that legislation (see Chapter 3). Fiscal 1981 funding was reduced by $5 million in the Supplemental Appropriations Bill (H.R. 3512-P.L. 97-12). FY'82 funding of $466 million was included in the Energy and Water Appropriations Bill (H.R. 4144-P.L. 97-88) passed in November 1981, and the same total was approved in December 1982 in the FY'83 Continuing Resolution (H. J. Res. 631-P.L. 97-377) that was passed after the Congress failed to agree on the FY'83 Energy and Water Bill (H.R. 7145). Table 1 gives the breakdown of funding for the different NRC offices.

Table 1

SUMMARY OF NUCLEAR REGULATORY COMMISSION FUNDING
(Budget Authority in millions of dollars)

	FY81	FY82	FY83
Nuclear Reactor Regulation	73.1	87.5	94.4
Inspection and Enforcement	59.0	59.5	69.3
Nuclear Material Safety and Safeguards	38.0	37.3	35.7
Nuclear Regulatory Research	215.5	220.3	209.5
Program Technical Support	35.2	24.2	27.1
Program Direction and Administration	34.3	37.6	39.4
Net Prior and Future Year Balances	--	-0.7	-9.3
BUDGET AUTHORITY	459.3	465.7	466.0

NRC Authorization: FY82 and FY83

The bill authorizing NRC appropriations for Fiscal 1982 and 1983 (H.R. 2330-P.L. 97-415), having failed to pass in the last day of the First Session on December 16, 1981, faced an identical crisis in the last days of the Second Session. A number of controversial legislative proposals, supplementary to the funding provisions, blocked passage in the Senate in the first Session, delayed agreement in the Second, and kept passage in doubt until a compromise was reached in the lame-duck session in December 1982.

Interim Licensing. One of the provisions which caused debate was the proposal to allow NRC to issue low-power testing licenses to applicants before completion of the hearing process. At the beginning of 1981 electric utilities claimed that 13 reactors that were scheduled to be completed in 1981 and 1982 could be delayed because of licensing delays, and in April 1981 NRC asked for interim licensing authority. The provision was included in the authorization bill reported out by the House Energy and Commerce Committee in June, and survived in the final version of the bill that was agreed to in December 1982. By that time, however, the number of plants to which the provision might be useful had shrunk to one, with a time saving for that project of about two months. The bill as passed allowed interim licenses to be issued until December 31, 1983.

Sholly Amendment. Another licensing provision in the Authorization bill reversed the U.S. Appeals Court decision in Sholly v. NRC (see above) to allow the agency to issue amendments to plant operating licenses before holding public hearings on the changes, if it found the amendments had "no significant hazards".

Other Provisions. An Administration suggestion that spent fuel from commercial reactors might be reprocessed to provide plutonium for the nuclear weapons program stimulated an amendment to the NRC Authorization bill prohibiting DOE from doing so. Controversy over this provision was the reason the bill did not pass during the First Session. The prohibition was included in the final version of the bill (see Nuclear Nonproliferation, Chapter V).

Another provision of the Authorization bill dealt with NRC regulation of uranium mill tailings (see Nuclear Waste, below). A further provision, aimed at helping the struggling uranium mining industry, would have imposed a moratorium on imports of uranium if they were greater than 37.5 percent of U.S. consumption. The import prohibition was the issue that held up passage of the bill in the lame-duck session. A compromise requiring that, if uranium imports exceeded 37.5 percent of consumption, DOE should determine if they should be restricted for national security reasons, allowed agreement to be reached on the bill. The uranium import provision was in the form of a concurrent resolution, S. Con. Res. 135, correcting H.R. 2330, passed by both Houses.

Emergency Planning. In the wake of Three Mile Island, the NRC Authorization Act for FY80 (P.L. 96-295) contained a provision (section 109) which required that operating licenses for existing nuclear powerplants and for plants nearing completion be contingent upon an NRC-approved State or local emergency preparedness plan adequate to protect the public health and safety. The NRC is responsible for determining the adequacy of State preparedness plans, but it depends on the expert advice of FEMA.

In section 5 of P.L. 97-415, the 97th Congress carried forward the requirement for an approved State or local emergency plan. However, since plans had not yet been approved for several operating plants, Congress authorized the NRC to issue operating licenses in the absence of a FEMA-approved State or local plan if the Commission finds there exists a State, local, or utility emergency response plan which gives reasonable assurance that the public health and safety will not be endangered.

LEGISLATIVE PROPOSALS

A number of additional nuclear topics were the subject of proposed legislation during the 97th Congress. Concern over the need to finance cleanup of the TMI-2 reactor in light of the infirm financial status of the utility owner, General Public Utilities, led to proposals for various kinds of financial participation by other electric utilities and State and Federal Government. As GPU's situation gradually improved, however, the impetus for the legislation, never very popular, waned. Among the bills on which some action was taken were H.R. 2512, on which the House Energy and Commerce Subcommittee on Energy Conservation and Power held hearings in May and September 1981, and S. 1606, which was reported out jointly by the Energy and Natural Resources Committee and the Environment and Public Works Committee in August 1982.

Several bills were introduced which would have changed the Price-Anderson nuclear liability law, among them H.R. 3515, H.R.3809, and H.R. 3915. H.R. 3809, which was Representative Udall's omnibus nuclear bill and later became the vehicle for the Nuclear Waste Policy Act of 1982 (see below), also originally had provisions for funding intervenors in nuclear licensing proceedings and a number of measures concerning emergency planning at nuclear plants.

Concern about the cancellation of nuclear plant construction projects was reflected in S. 2992, which would have allowed an income tax deduction for rate increases attributable to such events. A moratorium on issuance of operating permits and construction permits pending a study of nuclear power by the Office of Technology Assessment was called for in H.R. 751 and H.R. 2800. H.R. 2302 would have set up a Nuclear Safety Board. H.R. 6998 would have shut down the Indian Point nuclear station in New York. H.R. 6805 would have required voter approval of financing for Washington Nuclear Projects 1, 2, and 3 in Washington State.

PROSPECTS AND PENDING ISSUES

President Reagan, in a statement on October 1981, promised nuclear licensing reform proposals from the Department of Energy. The Nuclear Regulatory Commission was also considering proposals of its own. The main theme of these proposals, which received much discussion but were not submitted by either agency by the end of the 97th Congress, consisted of encouraging standardized design, allowing prior approval of plant sites, and moving toward a one-step licensing process. Another issue, considerably more difficult to resolve, was how to control requirements for backfitting of plants once they were under construction. These licensing reform proposals had been perennial topics for close to a decade, and could be expected to surface again in the 98th Congress.

Also likely to come up is more serious consideration of the Price-Anderson Act, which expires in 1987. Pressure to remove or modify the limit on liability was one prospect. Continuing financial difficulty and plant cancellations also promised to draw the attention of the Congress.

Nuclear Waste Management*

BACKGROUND

One of the most controversial aspects of nuclear power is the problem of disposing of the highly radioactive wastes produced by the fissioning of uranium atoms in a reactor. Because these wastes remain dangerous for hundreds and thousands of years, they must be isolated from the environment in such a manner that they need not be watched or guarded.

Federal policy on nuclear waste management has drawn much criticism, especially toward efforts to dispose of radioactive wastes for good. Numerous changes in direction over the years have raised doubts about whether or not high-level wastes from nuclear powerplants can be safely disposed of. In addition, the nuclear weapons program has been producing radioactive waste material since the 1940s. The ultimate disposal of these wastes has also remained an unanswered question.

Military high-level wste is in the form of liquid or sludge material sotred in tanks at several Department of Energy facilities. High-level waste from commercial power reactors is in the form of spent nuclear fuel stored mostly at the site of the power plants in pools of cooling water. In addition to the question of how these wastes will ultimately be disposed of safely, a number of issues concerned the 97th Congress, as they had concerned the Congress before it.

State and Local Participation

Because local opposition to the siting of waste repositories is expected to be strong, there was a perceived need to formalize the role of State and local governments in the decision-making process. Such proposals ranged from giving States veto power over siting a facility within their borders, to a formal review process by the President or the Congress or both, to a mere assertion of "consultation and concurrence" between the Federal agency and the local authorities.

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Spent Fuel Storage

Because of the delay, and the four-year ban, on commercial reprocessing of spent fuel, a number of utilities were faced with a shortage of on-site capacity to store spent fuel. The concept of centralized, away-from-reactor (AFR) facilities, to be built either by private industry or the Federal Government, was included in a number of legislative proposals.

Test and Evaluation Facility

A major question was whether the Department of Energy's waste program should develop a small demonstration project or a Test and Evaluation (T&C) facility, which would not undergo formal licensing procedures, or should proceed directly with a fully licensed, operational repository.

The DOE program under the Reagan Administration was to go ahead with a T&E facility, which would not be licensed by the Nuclear Regulatory Commission. In testimony before the Senate Energy Committee on March 17, 1982, Assistant Secretary for Nuclear Energy Shelby Brewer said DOE would begin exploratory shafts in three "candidate geologic repository sites" in CY83, and select one of those sites for a T&E facility in 1985. Brewer said the three locations would "likely be: in basalt flows on the Hanford (Washington) Site; in welded volcanic tuff on the Nevada Test Site (NTS); and in a salt formation site to be determined in CY83."

Monitored Retrievable Storage

Dissatisfaction with a total commitment to a permanent deep geological repository, which would not need to be monitored after it was filled, led to the concept of a long-term "Monitored Retrievable Storage" (MRS) facility, as a parallel or alternative.

Low-Level Waste and Mill Tailings

Legislation in previous Congresses had dealt with two other nuclear waste issues: the problem of disposing of materials contaminated with low levels of radioactivity, and the management of radioactive tailings left from the mining of uranium ore. However, the 97th Congress found it necessary to deal again with these issues again. In the case of mill tailings, the actions of EPA and NRC in carrying out the Uranium Mill Tailings Radiation Control Act (P.L. 95-604) were legislatively redirected; for low-level waste, Administration initiatives to revive the option of ocean disposal were the subject of an amendment to the Surface Transportation Act (P.L. 97-424) that effectively prohibited the practice.

LEGISLATION ENACTED

Nuclear Waste Policy Act of 1982 (P.L. 97-415)

Impatient with the slow and erratic course of the waste management program, pressure built in the 96th Congress for a nuclear waste bill that would set firm and early deadlines for demonstration of disposal, as well as deal with other pending issues such as State and local participation spent fuel storage, and low level waste.

Efforts to reach a consensus on these issues in the 96th Congress were unsuccessful. Although the House and the Senate each passed different major waste management bills, in the end they could agree only on a measure to deal with low-level radioactive waste: the Low-level Radioactive Waste Policy Act of 1980 (P.L. 96-573). The 97th Congress replayed the same drama, but succeeded, in the last days of the lame duck session, in reaching a compromise (P.L. 97-425).

With the failure of the 96th Congress to agree on a comprehensive nuclear waste bill, several of the major participants in that debate reintroduced legislation similar to their original bills. In the Senate a compromise among several positions led to passage on April 29, 1982 of S. 1662, the National Nuclear Waste Policy Act of 1982. The bill included the following provisions:

1. Away-From-Reactor (AFR) Storage. Establishment of a "federally owned and operated system for the interim storage of spent fuel" would be mandated, as a last resort for utilities that have no alternative to shutting down a plant because of lack of storage space for spent fuel. The total capacity of the AFR facilities would be limited to 2,800 metric tonnes. The AFR would be licensed by NRC and there would be a process of "consultation and concurrence," including possible payment of compensation, between DOE and State authorities.

2. Disposal of High Level Waste and Spent Fuel. A schedule would be set up to identify, "characterize," select, and license a permanent repository by the end of 1989, and another by the end of 1992. Presidential

approval would be required of potential sites, and State objections to a DOE application for an NRC construction permit would be considered by the Congress.

3. Test and Evaluation (T&E) Facility. DOE would be required to plan and build a T&E facility for operation by 1988. A limit of 300 "packages" of waste or spent fuel would be set. DOE could select an existing R&D site for a T&E facility, but not "any area of a site that the Secretary intends to recommend for characterization" as a licensed repository that he "determines would permit the physical integration of" the T&E facility and the licensed repository. The T&E facility would be subject to limited application of NEPA, but would not be licensed by NRC.

4. Monitored Retrievable Storage (MRS). DOE would be required to develop a plan for one or more long-term storage facilities for spent fuel and high-level waste.

5. Financing. A fee of 1 mill per kilowatt hour would be imposed on all nuclear-generated electricity to fund the waste program.

6. State and Local Role. State participation in all decisions would be encouraged through the "consultation and concurrence" process. In the case of repositories and MRS facilities, a DOE application to NRC for a construction permit would be submitted to the State; if the State objected, the objections would be transmitted to the Congress. A resolution in the House and the Senate, stating in specified language that DOE did not "sufficiently address State or tribal concerns," would be given privileged consideration. If the resolution passed in either the House or the Senate, DOE would be prohibited from submitting the application to NRC.

7. Weapons Program Waste. The President would be required to determine whether a repository or MRS for civilian waste should also be used for defense waste. If he found that a separate facility exclusively for defense waste was required, such a facility would be subject to licensing by NRC and to the congressional review of State objections.

In the House, a compromise bill, H.R. 3809, from the Interior, Energy and Commerce, and Science and Technology Committees was brought to the floor for one day prior to the election recess.

The major provisions of the bill included:

1. AFR Storage. DOE is to provide not more than 1,700 metric tonnes of storage at one or more facilities owned by the Federal Government at the time of enactment. Licensing of AFR at Federal facilities does not require NRC Licensing. If more than 300 metric tons is to be stored at any one facility, an Environmental Impact Statement by DOE is required, and objections by affected State or Indian authorities are sufficient to disapprove the project unless Congress passes a joint resolution in its favor.

2. Disposal of High Level Waste and Spent Fuel. A schedule would be set up to identify, "characterize," and select a disposal site by March 31, 1987. If the site selected by the President is objected to by State or Indian authorities, it is disapproved unless both Houses pass a resolution approving it. NRC will issue a final decision approving or disapproving of the application for construction authorization of the first repository by the end of 1989, and of a second repository by the end of 1992.

3. T&E Facility. A Test and Evaluation Facility, to accept not more than 100 cannisters of waste totalling 100 metric tons, is to be developed according to a specified shcedule. The facility would not be licensed by NRC, unless DOE plans to locate it at the site of a repository. Consultation and cooperation, including a written agreement with affected State or Indian authorities would be required, but they would otherwise have no "authority with respect to the siting, development of loading" of the T&E facility.

4. MRS. Within 2 years after enactment, DOE would submit a study of the need and feasibility of, and a proposal to construct, a Monitored Retrievable Storage facility. Any MRS would be subject to NRC licensing. No MRS could be located in a State in which a site approved for site characterization for a final repository was located. There are no provisions for State or Indian participation in MRS siting, except that impact aid to local communities would be provided.

5. Financing. An Interim Storage Fund, to cover the costs of AFR storage and impact assistance for MRS facilities, and a Nuclear Waste Fund, to pay for permanent disposal activities, would be set up, with fees to nuclear utilities to be determined by DOE.

6. Defense Waste. The President would be required to report on the advisability of disposing of defense waste in a civilian repository. If an exclusively defense waste repository is found necessary, State and Indian participation in siting, including congressional approval required over State or Indian objections, are the same as for civilian repositories. Otherwise, atomic energy defense activity or facilities would not be subject to the provisions of the Act, except for repositories not exclusively for defense waste.

A large number of amendments were ruled in order for consideration on the House floor of H.R. 3809. Among them were a change in the congressional review of State or Indian objections to AFR or repository siting, requiring one House to sustain objections for the proposal to be disapproved (Broyhill, Lujan, Moorhead); elimination of the AFR storage provision (Lundine); elimination of the T&E facility or making it subject to NRC licensing (Markey); and giving DOE 5 years to develop a proposal for an MRS (Udall).

The House approved the Broyhill and Udall amendments, but rejected most of the others, and passed the amended bill December 2. Negotiations between House and Senate Members led to a compromise bill, which was passed by both Houses without amendment December 20. The compromise version was essentially the same as the House-passed bill, except that the original House version requiring both Houses to approve a DOE siting plan over State objections was substituted for the one-House veto provision. Other changes from the House bill included a speed-up of NRC action on a construction permit for the first repository to the beginning of 1989, and for the second to the beginning of 1992. On the MRS, the compromise bill required DOE to submit a proposal by June 1, 1985, and removed the restriction on locating an MRS in a State in which a site approved for site characterization for a final repository was located.

The Nuclear Waste Policy Act set many deadlines for action by DOE and other agencies to meet in developing the various waste facilities. Table 1 lists the major statutory deadlines.

CALENDAR FOR ACTION ON NUCLEAR WASTE PROGRAM

Deadline	Type of Facility	Action
July 6, 1983	Repositories	Secretary of DOE issues general guidelines for recommending sites for repositories--must consult with "interested" governors.
July 6, 1983	Repository	DOE to notify governor, State legislature, Indian tribal council if "potentially acceptable" site is located in State or on reservation.
Jan. 1, 1984	Repositories	NRC to promulgate rule for technical requirements and criteria for approving/disapproving repository applications for construction, operations, closure and decommissioning.
Jan. 7, 1984	Repositories	EPA to issue rule establishing standards for protecting general environment from off-site releases.
Jan. 7, 1984	T&E	DOE to select three or more sites in at least two media for test and evaluation facilities.
Jan. 7, 1984	Hanford Repository	DOE must have held public hearings in vicinity of Hanford site by this date regarding site characterization.
Jan. 6, 1984	T&E	DOE to hold public meeting (not hearing) in vicinity of each site before beginning siting research activities.

Deadline	Type of Facility	Action
before Jan. 7, 1985	Repositories	DOE nominates five sites for site characterization and prepares environmental assessment on each. Encironmental assessment can be reviewed in U.S. Court of Appeals.
Jan. 7, 1985	Repositories	DOE selects three of five sites for site characterization.
Mar. 7- Sept. 7, 1985 (delay date)		President can approve or disapprove sites for site characterization.
Jun. 1, 1985	MRS	DOE submits proposal to Congress for authorization to construct one or more monitored retrievable storage facilities.
July, 1985	T&E	DOE to select one site for expanded siting research activities.
1985-87	Repository	DOE must hold public hearing before sinking shaft as part of site characterization.
Mar. 31, 1987 (can be delayed one year)	Repository	President recommends first site for repository to Congress.
May 31, 1987	Repository	Governor or State legislature may submit notice of disapproval to Congress for site in their State.
Jun.-Aug. 1987	Repository	Two-House override: Resolution approving site introduced in both Houses of Congress immediately following State disapproval. Final vote required in 90 days. Both Houses must vote for resolution to overturn State objection.

Dealine	Type of Facility	Action
May, 1988	T&E	DOE to begin mining and construction of T&E facility. No NRC license required, but environmental assessment must be prepared.
Jul. 1, 1989	Repository	Second round of five sites to be selected by DOE. Three new sites and two sites characterized in first round.
Mar. 31, 1990	Repository	President recommends second repository site to Congress. Note:. Only nine months allowed for characterization of three new sites, compared to two years in first round.
May, 1990	T&E	DOE to begin on-site testing using radioactive materials. Full EIS must be prepared in advance.

Low-Level Waste Management

Prior to the early 1960s, the Government was responsible for the disposal of all low-level radioactive waste, most of which was produced in the weapons program. This material was buried in shallow landfills or dumped in the ocean. Ocean dumping was halted in 1970 as landfills became more available.

Beginning in 1962, the Atomic Energy Commission began licensing privately owned commercial burial grounds for disposing of low-level waste from nuclear power plants, industrial activities, and medical and research institutions. A total of six sites in various parts of the country were licensed. However, three of those were subsequently closed or filled up, leaving only those at Hanford (Washington) and Beatty (Nevada) in the West and Barnwell (South Carolina) in the East still accepting waste. In 1979, both Hanford and Beatty were temporarily closed, and Barnwell was sharply restricted in the amount of waste it could accept. The crisis led to calls for a structured solution to the low-level waste problem.

Congress responded by passing the Low-Level Radioactive Waste Policy Act of 1980 (P.L. 96-573), which declared each State responsible for the safe disposal of low-level waste generated within its borders. The law recommended that States enter into regional compacts to operate waste facilities, the compacts requiring congressional approval. It also granted member States of the regional compacts the right, after 1985, to refuse waste from States outside their region.

Ocean dumping as a method for the disposal of low-level waste received new interest in 1982, when EPA announced that it intended to revise regualtions allowing the ocean to rank as an equal option to land disposal. Environmental groups balked at this idea and attempted to postpone ocean disposal action until a thorough analysis on environmental effects was completed. An amendment to S. 1662, the National Nuclear Waste Policy Act of 1982, would have postponed any ocean dumping action until an EPA analysis on the adverse effects of ocean disposal as compared to land disposal was completed. This provision did not survive in the bill as passed, however. Similarly, H.R. 6113, the Ocean Dumping Act of 1982, would have placed a two-year freeze on ocean dumping to allow time for a more complete study on its safety. H.R. 6113 did not pass the 97th Congress, but provisions limiting ocean dumping of low-level radioactive waste were included in the Surface Transportation Act (P.L. 97-424). Section 424 of the Act prohibits EPA for two years from issuing a dumping permit, except for carefully defined R&D activities. It also requires EPA, after the two-year moratorium, to prepare a "Radioactive Material Disposal Impact Assessment" before issuing a permit, and requires approval from both Houses of Congress before the EPA permit is issued.

Mill Tailings Control Policy

The Uranium Mill Tailings Radiation Control Act (UMTRCA, P.L. 95-604) established a guideline for the stabilization, disposal, and control of uranium mill tailings. Regulatory responsibility for their cleanup and disposal at active mill operations was entrusted to NRC, and at inactive mill operations to DOE. The Act also required EPA to set initial guidelines to assist NRC and DOE with their standards.

Following two years of silence from EPA on active mill tailing cleanup, NRC went ahead and promulgated its own guidelines for the disposal of this radioactive waste. This action was opposed by the uranium industry (and the States where the industry is concentrated). The industries claimed that NRC overstepped its authority in bypassing EPA and promulgating tailing regulations. It also opposed having to conform to the regulations within the three-year deadline established by UMTRCA, since two had already elapsed while the agencies formulated the guidelines.

State authorities were upset by the NRC action because the so-called agreement States, which under the Atomic Energy Act were allocated responsibility for their mill tailings operations, were required to uphold regulatory standards established by EPA and NRC or relinquish the control of their milling programs.

An amendment to the FY 1982 Energy and Water Development Act (P.L. 97-88) prohibited NRC from using its 1982 appropriations to enforce its standards for mill tailing regulation. This suspension of NRC's enforcing ability gave the States an extension on their deadline for meeting these standards.

An amendment to the Senate's version of the NRC FY82-83 Authorization Bill (S. 1207/H.R. 2330) reestablished the mill tailing requirements decreed by UMTRCA. It declared new deadlines for the regulation standards at milling sites, forced NRC to conform its regulations to EPA standards, and clarified the relationship between NRC and agreement States. Additional analysis by EPA was expected to result in less stringent standards for mill tailing cleanup than originally expected. The House-passed version did not contain a mill tailings provision, but the main features of the Senate language were accepted by the Conference Committee on the bill, and the legislation was passed Dec. 16, 1982 (P.L. 97-415).

Waste Management Budget

While progress toward locating and building a waste repository has been slow, Federal spending on waste management R&D has increased sharply, going from $12 million in FY76 to $100 million in FY77, $200 million in FY78, and $300 million in FY81. The FY82 appropriation was $210 million. For FY83, the Administration requested $80.5 million appropriation, to be supplemented by $185 million from a Nuclear Waste Disposal Fund to be levied on nuclear utilities. However, although the Nuclear Waste Fund was included in the Waste Policy Act as passed, the continuing resolution appropriated funds for civilian nuclear waste management at the same level as in FY82.

In addition to this funding for commercial nuclear waste activities, the FY83 request includes $518 million for defense nuclear waste, part of a $5.506 billion request for atomic energy defense activities. The continuing resolution appropriated $5.7 billion for the total program, but did not specify an amount for waste activities. The House Appropriations Committee recommended $516 million, while the Senate Appropriations Committee recommended $529 million. While much of this funding is for interim storage of the reprocessed high-level waste, transuranic (TRU) waste and low-level waste produced in the weapons program and the operation of naval nuclear reactors, it also includes two major projects: a Defense Waste Processing Facility at Savannah River, South Carolina and the Waste Isolation Pilot Project (WIPP) near Carlsbad, New Mexico, an area consisting of large bedded salt deposits that are regarded as possible candidates for a waste repository.

PROSPECTS AND PENDING ISSUES

Passage of the Nuclear Waste Policy Act of 1982 removed much of the pressure on the Congress to address nuclear waste issues in a major way. The major legislative interest for the 98th Congress will probably be the consideration of Low Level Waste Regional Compacts, which under the Low Level Radioactive Waste Policy Act of 1980 must be approved by Congress.

Mandated actions and schedules for action by DOE and other agencies will also draw Congressional attention, as will the nuclear waste budget and the implementation of the Nuclear Waste Fund.

Preventing the Further Spread of Nuclear Weapons*

BACKGROUND

The 97th Congress showed a continuing interest in prospects for and prevention of the further spread of proliferation of nuclear weapons. Congressional interest responded to notable changes in the development and application of U.S. non-proliferation policy by the Reagan Administration, as well as to important events abroad.

U.S. Non-Proliferation Policy Under the Reagan Administration.--U.S. policy for preventing the spread of nuclear weapons is based upon statutory policy laid down primarily in the Atimic Energy Act of 1954, as amended, and the Nuclear Non-Proliferation Act of 1978. Interpretations of this legislation and additional policy based on powers of the Executive Branch are also fundamental elements of U.S. non-proliferation policy.

During 1981 and 1982, President Reagan and his Administration did not formally propose any changes for U.S. non-proliferation legislation, as had originally been expected. However, it appears that this Administration's implementation of statutory policies and its own policies differ in emphasis or in substance from some points of U.S. policy during the Carter Administration. Specifically, it encouraged commercial reprocessing of spent nuclear fuel in the United States, reemphasized completion of the Clinch River Breeder Reactor and gave strong encouragement to U.S. nuclear exports and to reestablishing the United States as a reliable nuclear supplier. The Reagan Administration also announced that it would not seek to inhibit reprocessing and use of breeders -- which implies commercial production and use of plutonium as a nuclear fuel -- in countries that have advanced nuclear programs and do not constitute a proliferation risk. While these changes were supported by some Members of Congress, others pointedly disagreed, seeing in them a relaxation of, or even a turning away from, the non-proliferation policy of the previous Administration, which was characterized by technological denial and the indefinite deferral of commercial use of plutonium both at home and abroad. Suspicions that the Administration also contemplated use of commercial spent fuel as a source of plutonium for production of nuclear weapons also aroused congressional concern.

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* By Joseph F. Pilat and Warren H. Donnelly, Office of Senior Specialist.

Notable events.--The most dramatic external event during the 97th Congress was Israel's bombing of Iraq's large research reactor on June 7, 1981. This virtually unprecedented preemptive strike against an opponent believed to be developing a nuclear weapons capability increased congressional awareness of the dangers of proliferation. Israel's action, which showed that it had little confidence in the international non-proliferation regime, increased concern in some quarters about the weaknesses and gaps in that regime. It led to hearings in both the House and Senate on the adequacy of international inspection and safeguards for such facilities.

Another significant external event was the denial of the Israeli delegation's credentials by the General Conference of the IAEA in September 1982. Although this action did not expel Israel from the Agency, it resulted in the walkout of the U.S. delegation and he boycott of the Agency by the United Sttes; a reassessment of U.S. participation in the IAEA; and Congressional action on U.S. funding for the IAEA, which tied availability of FY 83 funds to Israel's full participation in the activities of the Agency.

Other events which sustained Congressional interest included Pakistan's continuing efforts to purchase equipment on the world market for its enrichment project; unconfirmed reports that Israel possesses a nuclear weapons capability; suspicions that Pakistan might purchase Westinghouse nuclear power technology through a Spanish licensee; Argentina's continued work on a comparatively large pilot reprocessing plant, along with the export of a U.S. computer system to Switzerland for ultimate end-use in an Argentine heavy-water production plant; suspicions about nuclear activities of South Africa, which were heightened by controversial Administration decisions to supply certain so-called "dual-use" items and materials to that country; the attempts of the Administration to terminate the 1963 U.S. nuclear agreement with India and to find an alternate fuel supplier; and the decision to supply U.S. enrichment technology to Australia.

LEGISLATION ENACTED

During the 97th Congress, the Senate approved Protocol I to the Treaty of Tlatelolco, which states that countries outside of Latin America having international responsibilities for territories. As well, the Senate ratified the Convention for the Physical Protection of Nuclear Materials, which provides for international cooperation to assure that civil nuclear materials are protected during international transport, and the Congress subsequently enacted implementing legislation for the Convention (P.L. 97-351).

The 97th Congress revised the Symington and Glenn Amendments to the Foreign Assistance Act of 1961, which provided for cutoff of certain military and economic assistance to countries that supply or receive the wherewithal for enrichment or reprocessing. In the International Security and Development Cooperation Act of 1981 (P.L. 97-113), Congress authorized the Presidnet to waive Symington amendment sanctions against Pakistan -- triggered by Pakistan's continuing effort to import components for an enrichment plant -- through September 30, 1987, if he determined that to do so would be "in the national interest of the United States." However, it also added new triggers for cutoff of economic and military assistance to any non-nuclear-weapon state, including Pakistan, that either transfers a nuclear explosive device to a non-nuclear weapons state or detonates a nuclear explosive. In either case, the President may continue the prohibited aid for no more than thirty days unless Congress by joint resolution authorizes further continuation.

The House and Senate in July 1981 unanimously passed resolutions calling upon the President to strengthen the international non-proliferation regime (H. Res. 177; S. Res. 179) in order to encourage him to take up non-proliferation policy at the Ottawa Summit. In May 1982, the House and Senate again unanimously passed resolutions confirming those passed in July and urging the President to seek agreement at the Versailles Summit that nuclear supplier nations should export nuclear fuel and equipment only to nations that accept full-scope safeguards (S. Con. Res. 96; H. Con. Res. 340).

The enactment of the NRC FY82 and FY83 authorizations is significant, for it embodied an amendment to prohibit the transfer, use or reprocessing of special nuclear materials from commercial nuclear power plants for weapons purposes. Likewise, the FY 83 continuing appropriations contained an amendment requiring the IAEA's Board of Governors to certify Israel is a full participant in the Agency's activities before the U.S. funding contained in the appropriation will be made available.

LEGISLATIVE INITIATIVES

By 1981 or 1982, some Members of Congress had concluded that there were loopholes in the Nuclear Non-Proliferation Act and that the Reagan Administration was too much inclined to relaxed terms for cooperation and supply. As indicated, the House and the Senate both passed resolutions urging President Reagan to bring up controls over nuclear trade and cooperation at the Ottawa and Versailles summit meetings, and there was disappointment when he did not. Later, several bills to amend the NNPA were introduced in the House and Senate. While these bills might vary in detail, all would tighten conditions and controls for U.S. nuclear cooperation and trade, particularly for sensitive nuclear technology, i.e. that involving enrichment, reprocessing, plutonium fuel fabrication and heavy water production. Of these bills, only H.R. 6032 (reported as H.R. 7430) was reported by full committee -- the House Foreign Affairs Committee in December 1982.

During the 97th Congress, legislation was also proposed to prevent military use of civilian plutonium in the United States; to call for negotiations to halt the production of plutonium; to discourage production and use of plutonium abroad; to prohibit export and use abroad of certain nuclear technologies; to prohibit transfers of nuclear materials to countries refusing to become party to the NPT; and to totally prohibit nuclear trade with South Africa.

MAJOR HEARINGS AND REPORTS

Major oversight hearings during the 97th Congress centered on the Israeli raid and the adequacy of IAEA safeguards on the one hand, and on the Reagan Administration's non-proliferation policy on the other.

Following the Israeli bombing of Iraq's research reactor, the Senate Foreign Relations and the House Foreign Affairs Committees both held hearings on the attack. The adequacy of IAEA safeguards was considered in these hearings, and in subsequent hearings held in 1981 and 1982 by byth committees. The House Committees on Science and Technology held two days of hearings on safeguards research and development in 1982.

In 1981 and 1982, the Governmental Affairs and Foreign Relations Committees of the Senate held hearings on the Reagan Administration's non-proliferation policy. The

Administration's policies were also considered in House Foreign Affairs Committee hearings in 1981 and 1982 on security and economic assistance to Pakistan, U.S. nuclear fuel retransfer policy, U.S. policy for licensing nuclear exports and authorizing nuclear technology transfers, U.S. controls over exports to South Africa, and House legislation to amend the NNPA.

Other major hearings included House Foreign Affairs Committee hearings on the GAO report to Congress on the NNPA and on dealing with problem countries, i.e. those posing poliferation risks; and House Interior Committee hearings on obtaining plutonium for weapons from commercial spent nuclear fuel.

The Office of the Comptroller General's report to Congress of May 1981, entitled "The Nuclear Non-Proliferation Act of 1978 Should be Selectively Modified," is significant. Mandated by the NNPA, this review of experience with the NNPA recommended that the Act should be selectively modified to conform with political, technical, and economic realities; obtain wider international acceptance; preserve the non-proliferation regime; and improve executive branch implementation. On the controversial subject of IAEA safeguards, the report indicated improvements are needed if they are to fulfill the Agency's increasing safeguards responsibilities. Regarding adequacy, the report said:

> The extent to which present safegurds are effective is largely a matter of judgement. It would be difficult to prove if or to what degree safeguards have achieved their desired effect. Nevertheless it is clear that the credibility of international safeguards as a deterrent to proliferation depends upon the probability of prompt detection. In many cases this probability of detection needs to be increased.

PROSPECTS AND PENDING ISSUES

For the 98th Congress, major pending issues relating to non-proliferation are likely to include:

(1) Consideration of the Administration's reassessment of U.S. relations with the International Atomic Energy Agency and the future role of the Agency as a keystone for the world non-proliferation regime

and for U.S. non-proliferation policy; and consideration of the impact of an amendment to the continuing appropriation for FY83, which requires Agency certification that Israel is a full participant in its activities in order for U.S. funding for the Agency to be available.

(2) Oversight of the Reagan Administration's non-proliferation policy, particularly its policy for reprocessing and plutonium use, which contemplated generic approgals for reprocessing of U.S. controlled spent fuel abroad and export of reprocessing technology.

(3) Further inquiry into non-prolifertion conditions and controls for "grey area" or "dual-use" exports, which could be sued for nuclear purposes, and the manner in which they are implemented by the Reagan Administration.

(4) Action on incomplete legislation to amend the NNPA carried over from the 97th Congress, keeping in mind the recommendations of the GAO report on the NNPA.

(5) Assessment of principal proliferation risks for the 1980s.

(6) Further thinking about the implications for further proliferation of commercial production and use of plutonium as a nuclear fuel; the adequacy of non-proliferation commitments and IAEA safeguards to verify them for nuclear power based on plutonium; and improvements needed if plutonium is to be used commercialially, and the likelihood of obtaining necessary improvements.

(7) Initial thinking about implications for further spread of nuclear weapons for U.S. national security and foreign policy, including plans and strategies for "managing" proliferation.

(8) Assessment of Administration action or inaction on the Comprehensive Nuclear Test Ban Treaty, and its impact on U.S. policy to prevent the spread of nuclear weapons.

Fusion Energy Research and Development*

BACKGROUND

Nuclear fusion is a potential source of energy which relies on low-cost, readily available, inexhaustible fuels and may pose fewer environmental and safety problems than current fission plants. In principle, fusion could be used to generate electricity or supply heat for industrial processes. However, the technical and economic feasibilities of fusion have not been demonstrated, and it is not expected to contribute to U.S. energy supplies in the near term.

The primary issues facing Congress regarding fusion are the determination of the pace, funding level, and overall program strategy for fusion research, development, and demonstration. The 96th Congress established, in P.L. 96-386, an ambitious program for the demonstration of fusion energy. However, the funding levels necessary to maintain that program were not realized during the 97th Congress.

Molecules of fusion fuel must be brought extremely close together in order to fuse. Two different approaches to accomplish this are being pursued. In "magnetic-confinement" fusion, strong magnetic fields are used to confine a gaseous fuel while it is heated to temperatures of about 100 million degrees. At those temperatures the gas molecules move at great speeds and can approach one another close enough to fuse. In "inertial confinement", solid pellets of fusion fuel are exploded by bursts of energy from laser beams or other energy sources and the force of the explosion brings the molecules in the center of the pellet close enough to fuse.

Inertial-confinement fusion is of interest for weapons development as well as for energy applications. The concept appeared promising for energy applications in the early 1970s, but the promise has not developed and inertial fusion is now primarily being pursued for its weapons applications. Hence, this section will focus on magnetic-confinement fusion developments.

While some private funds are spent on fusion development, the great majority of funding comes from the Department of Energy. About $3 billion has been spent on magnetic fusion since the program began in 1951.

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*By Robert L. Civiak, Science Policy Research Division

Commercialization of fusion energy can be thought of as a three-stage process. First, the scientific feasibility of fusion energy must be demonstrated; energy "break even" must be achieved whereby more energy is produced through controlled fusion than is used to sustain the process. Next the engineering feasibility must be demonstrated, which will required producing energy continually over long time periods. Last, fusion would have to be shown to be commercially attractive compared to alternative energy sources.

Experimental fusion devices scheduled to begin operation in the next 1-5 years in the United States and abroad are expected to demonstrated scientific feasibility. In anticipation of that result, the 96th Congress passed the Magnetic Fusion Energy Engineering Act of 1980, P.L. 96-386, which established a national goal of demonstrating the engineering feasibility of fusion by the early 1990s.

The 1980 Act specifically called for the operation of a Fusion Engineering Device (FED) by 1990 and a magnetic fusion demonstration plant (DEMO) by the year 2000. The 1980 Act found that the program would require an increase in funding for magnetic fusion of 25 percent in real terms in each of fiscal years 1982 and 1983 and a doubling in funding within seven years, from the FY81 base of $394 million. However, it did not authorize actual spending levels.

Despite the fact that the 1980 Fusion Act had considerable support in Congress, the Reagan Administration proposed relatively constant funding levels for magnetic fusion for FY82 and FY83. The mood of fiscal restraint that existed during the 97th Congress prevented the budget increases called for in the Act from being realized. The FY82 appropriation for magnetic fusion ($454 million, including $18.5 million deferred from FY81) represented only about a four-percent increase before inflation. While action is not complete on FY83 funding, it appears that it may be at about the same dollar level as in FY82, which would represent a decrease in real terms.

In addition to proposing constant funding levels for magnetic fusion development, the Department of Energy has decided not to build the Fusion Engineering Device called for in the 1980 Act. DOE has decided instead to rely on existing fusion facilities until 1988, when work might begin on a new facility.

LEGISLATION ENACTED

FY81 Supplemental Appropriations and Rescissions

Soon after the Inauguration, the Reagan Administration requested a supplemental appropriation of $5 million for the Tokamak Fusion Test Reactor (TFTR), under construction at the Princeton Plasma Physics Laboratory, and rescissions of $14 million from the Fusion Materials Irradiation Test (FMIT) facility, under construction at the Hanford Engineering Development Laboratory, and $2 million from the Impurities Studies Experiment (ISX-C), at Oak Ridge National Laboratory. The House (H. Rept. 97-29) did not approve the supplemental request, changed the rescissions to deferrals, and added $2.5 million in deferrals of operating funds from various other projects. The Senate (S. Rept. 97-67) approved only the deferrals for the FMIT and ISX-C. The Conference Committee (H. Rept. 97-124) recommentded the deferrals adopted by the House, which were included in the bill as signed into law (P.L. 97-12)

FY82 Authorization and Appropriations

The FY82 authorization, included in the Omnibus Budget Reconcilation Act (P.L. 97-35), and the FY82 appropriation for magnetic fusion energy (P.L. 97-88) both generally followed the Administration's budget request. However, in each, $14 million was added for the FMIT and $3.5 million was added for the ISX-C, both of which had been scheduled for cancellation by DOE. The total appropriation for FY82 for magnetic fusion was $454 million.

FY83 Appropriation

For FY83, the Administration requested a decrease of $10 million from the previous years funding for magnetic fusion to $444 million. In preparing the budget, the Office of Management and Budget (OMB), over protests from DOE, cut $25 million from the proposed funding for the Magnetic Fusion Test Facility (MFTF) located at the Lawrence Livermore Laboratory. The cut, which would delay an upgrade of the facility by 2-3 years, led to the resignation of the man who had headed DOE's Office of Fusion Energy since it was created, Edwin Kintner. The Administration also proposed cancelling the Elmo Bumpy Torus (EBT-P) project and the FMIT.

Action was not completed on the FY83 Energy and Water Development Appropriation Bill (H.R. 7145). However, a continuing resolution signed into law October 2, 1982 (P.L. 97-276) provides for spending on programs contained in that bill to proceed until December 15, 1982 at the rate specified in the version of H.R. 7145 as reported by the House Appropriations Committee (H. Rept. 97-850). The Appropriations Committee bill added $25 million to the Administration request for magnetic fusion for a total of $469 million. The Committee added $15 million to the MFTF so that the upgrade would be delayed by only one year, added $14 million for construction of the EBT-P, and added

$2 million to maintain a small level of effort at FMIT. The Committee also specified a general reduction in operating expenses of $6 million.

LEGISLATIVE INITIATIVES

Resolution Supporting 1980 Fusion Act

Joint resolutions were submitted in both houses (H.J. Res. 513 and S.J. 202) which resolved that "the Government of the United States should maintain a consistent, continuing commitment to the research and development and engineering of fusion energy as embodied in the intent of the Magnetic Fusion Energy Engineering Act of 1980." The resolution had 40 cosponsors in the House and 18 in the Senate, but no action was taken.

PROSPECTS AND PENDING ISSUES

The major issue regarding fusion development remains whether or not to authorize the design and construction of a new fusion development facility with capabilities significantly beyond those of facilities currently in operation and under construction. The next step is no longer being called the Fusion Engineering Device (FED), but is now referred to as the Tokamak Fusion Core Experiment (TFCX). Whatever its name, a major new facility would likely cost upwards of $1 billion.

The fusion community has been advocating the need for a new facility for the past six years, but has not gained the support of the Department of Energy. Congress indicated its support for a new facility in the 1980 Fusion Act. Because of a lack of administration support, however, funds have not been committed for the next step in fusion development.

Hydropower*

BACKGROUND

Hydropower was a major source of electric power throughout the first part of the 20th century, accounting for 35 percent of the Nation's electrical generating capacity at the end of World War II. The development of hydropower declined during the 1960s and 1970s, however, because of cheaper fuels, optimistic forecasts for nuclear energy, trends toward centralized generation, and the lack of good new sites. In 1981, 14,000 hydropower facilities had a capacity of more than 72,000 MW (megawatts), providing 11.4 percent of the Nation's electrical capacity.

Congressional interest in developing hydropower potential in the United States has concentrated on enhancing the market for small-scale hydropower projects with 30 MW of installed capacity or less. The development of small-scale hydropower has benefitted from the Congressional policy of the past five years encouraging small power production. The expanded interest in small-scale hydropower is demonstrated by the 18-fold increase preliminary permit application to the Federal Energy Regulatory Commission (FERC) for developing small-scale hydropower projects between 1977 and 1982.

The role of the Federal Government in developing small-scale hydropower is changing from one of direct financial and programmatic support to enhancing private developers viability in the marketplace. This trend is evidenced by the elimination of financial and programmatic support by the government and legislation considered by the 97th Congress.

LEGISLATIVE INITIATIVES

The economic viability of small-scale hydropower will be affected by the outcome of two issues that stem from Section 210 of the Public Utilities Regulatory Policy Act (PURPA, P.L. 95-617).

In January 1981, the mandatory interconnection rule and the full avoided-cost rule, promulgated by FERC to implement Section 210, were declared invalid by the

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Federal Circuit Court of Appeals of D.C. in its ruling on AEP v. FERC. Without the guarantee of mandatory interconnection with utilities and compensation for their power at the avoided cost, small power producers are less likely to sufficiently prove the economic viability of their facilities to prospective project financers. Legislation was introduced in the House and Senate (S. 1885 and H.R. 6500) to restore certainty to the small power producers market by codifying these two rules. Hearings were held in both houses, but no legislation was reported.

The 97th Congress also considered legislation that would have clarified some of the rules for determining who gets preference to develop a potential site, that would have established the Northeast-Midwest Hydropower Financing Authority, that would have expanded the types of small-scale hydropower projects eligible for exemption from the licensing process, and that would have repealed the limit on ownership by utilities of small power production facilities. All of these issues are likely to carry over to the 98th Congress.

Major Reports and Studies

During 1982, the Corps of Engineers and Bureau of Reclamation both released studies identifying potential small-scale hydropower sites. The final report of the Corps of Engineers National Hydroelectric Power Resources Study covers a wide range of topics, including legal and institutional aspects of hydropower development, environmental assessments, and the potential for increasing output as existing hydropower plants. The Bureau of Reclamation's report, "Low-Head Hydroelectric Sites in the Western States", identified 57 sites in western U.S. where run-of-the-river, low-head projects had a positive cost/benefit ratio.

CHAPTER V. RENEWABLE ENERGY POLICY

Introduction

The Reagan Administration is promoting an energy policy which places greater reliance on market forces and private sector investments. Under Reagan, the Federal energy effort emphasizes long-term, high-risk projects; near-term technology development and commercialization is being turned over to the private sector. The Adminsitration reasons that extensive support of near-term, market-ready technologies is no longer necessary in light of economic recovery, regulatory relief, rising energy prices, and economic incentives for energy investments.

Consistent with this new policy, the Reagan Administration began in the 97th Congress to dismantle much of the Federal renewable energy program as it existed under President Carter. Commercialization activities in all renewable enegy program areas, for the most part, were to be terminated; FY83 funding was cut to about one-third the FY81 level; and all major Federal subsidy programs for renewable were put under active review for possible termination. As a result of the Adminsitration's efforts, an eight-year growth trend in the Federal budget for renewables was reveresed, and the focus of the Federal effort is now on long-range R&D, rather than on near-term commercizalization as it was under the Carter Administration.

This chapter describes the actions taken in the 97th Congress with respect to renewable energy, with special attentin to solar energy, alcohol fuels, wind energy, ocean thermal energy conversion and geothermal energy.

Solar Energy*

BACKGROUND

During its first year in office, the Reagan Administration brought about a major shift in Federal solar energy policy by reducing the solar R&D budget to about half the prior year level and by largely terminating the Federal role in solar commercialization. The Administration's actions ended eight years of expanding solar budgets and expanding Federal involvement in solar commercialization activities. Solar energy tax credits came under active review for possible termination at a later date.

The Administration's strategy calls for the private sector to fill the void left by the Government's withdrawal of support for solar commercialization and selected hardware development programs. However, because of current economic conditions, the solar industry was slow to pick up all of those responsibilities.

LEGISLATION ENACTED

In the first session, major congressional action in solar energy centered on rescissions to the FY81 appropriation and on the FY82 authorization and appropriation bills. In general, Congress accepted the Administration's move away from solar commercialization activities, but resisted attempts to terminate solar development programs which it considered important.

The Administration's FY81 rescission request package included a $95 million rescission to the DOE solar R&D program and the rescission of all HUD funding for the Solar Energy and Energy Conservation Bank. Congress approved $47 million of the DOE solar rescission, but deferred the rest, thereby reducing the FY81 DOE solar appropriation to about $502 million. The Solar Bank rescission was approved in full, resulting in the termination of all activity on the Bank for FY81.

FY82 authorizations for DOE solar programs and the Solar Bank were provided in the Omnibus Budget Reconciliation Act (P.L. 97-35). The Act authorized $303 million for DOE solar programs, which was $110 million above the Administration's request of $193.3 million, but almost $300 million less than the FY81 appropriation before the rescission. Solar programs authorized by the Act to save them from termination included the ocean thermal energy conversion program, the large wind systems development program, and major elements of the photovoltaics development program. In a compromise between the House and Senate, the Act authorized the Solar Bank at $50 million to save it from probable extinction.

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* By J. Glen Moore, Science Policy Research Division.

FY82 appropriations totalling $275.45 million for DOE solar R&D programs were provided in the Energy and Water Development Appropriation Act (P.L. 97-88). Funding was included for programs authorized in P.L. 97-35, including those which the Administration wanted terminated. A $23 million appropriation for the Solar Bank was provided in the HUD and Independent Agencies appropriation bill (P.L. 97-101). The Administration continued to resist the implementation of the Bank in FY82 despite this appropriation. A lawsuit was filed April 7, 1982, in an attempt to force the Administration to implement the Bank. After failing to get Congress to approve a rescission of FY82 Bank funding, the Administration began moving in early May toward implementing the Bank. However, because of start-up duties and the Administration's low priority for the Bank, the first loans had still not been issued by the close of the 97th Congress. In action related to the withdrawal of Federal support for solar commercialization activities, the Administration terminated the four regional solar centers effective May 1, 1982.

In second session action, the Administration's FY83 budget request proposed the transfer of solar projects from DOE to the Department of Commerce and a solar funding level of $72 million. The budget would have eliminated several solar programs, including active and passive solar heating, ocean energy systems, and the new Solar Energy Research Institute facility. There was significant support in both Houses for an FY83 solar budget at least as large as the FY82 budget, and for restoring many of the programs which the Administration wanted eliminated. The House Appropriations Committee reported H.R. 7145, the Energy and Water Development Appropriations Bill, on September 21, 1982 (H. Rept. 97-850). A funding level of $180 million was recommended for solar programs (including $5 million for alcohol fuels). The HUD-Independent Agencies Appropriation bill, 1983 (P.L. 97-272) provided $20 million in new appropriations for the solar bank and stipulated that unspent FY82 funds totalling $23 million would be carried over and made available in FY83.

With only one exception, non-budgetary solar or solar-related legislation received no floor action in the 97th Congress; only a few bills received committee action. The exception was the Economic Recovery Tax Act (P.L. 97-34), which contained solar-related provisions. A Senate floor amendment to this bill exempted certain renewable energy property from an "at-risk" provision which would have hampered investments in industry or utility solar projects. Another provision allowed a 25-percent tax credit to help cover costs incurred in the research and development of new solar energy products. Other indirect benefits to solar energy may also accrue from this act.

LEGISLATIVE INITIATIVES

Perhaps as a consequence of the unusually high level of attention given the budget process, there were fewer solar bills introduced in the 97th Congress than in past Congresses. Few of those bills received committee action, and no major new initiatives were offered. The 97th Congress might be characterized as a defensive period for solar interests, with supporters spending much of their effort protecting solar programs and budget levels achieved in previous years.

The only "solar only" bill to receive committee attention was S. 498, a bill to provide a maximum $2,000 tax credit to homebuilders who construct passive solar homes. Language identical to S. 498 had been approved by the Senate in 1980 as part of the Windfall Profits Tax Act, but was later dropped during the conference on the bill. S. 498 failed to reach the floor.

Solar-related bills which received hearings include four similar Senate bills, S. 750, S. 787, S. 1288, and S. 1323. These bills would have increased the business energy tax credit to 20 percent, extend the time the credit was available to the end of 1986, and broaden the range of energy investment eligible for the credit. While these bills were aimed primarily at conservation improvements in industry, solar would also have benefitted. Hearings were also held on S. 1449, a bill to clarify the situation with respect to "double dipping" on State and Federal subsidies for renewable energy investments. The bill would have permitted a purchaser of a conservation or a renewable energy improvement to obtain both a Federal credit and a State-funded loan or grant. It would have limited the purchaser to only one Federal subsidy which could have been either a tax credit or a direct loan or grant.

On the closing day of the 97th Congress, five Members of the House Ways and Means Committees introduced H.R. 7268, the Renewable Energy Incentives Act of 1982. This bill went further than the four similar Senate bills cited above. It would have doubled the existing 15 percent business energy tax credit and extended the credit through 1987. After that, a 15 percent credit would have been available through 1990.

PROSPECTS AND PENDING ISSUES

A Solar Energy National Security and Employment Act is being readied for introduction early in the 98th Congress. Sponsors hope the bill will raise the national solar debate to pre-Reagan levels. Although the Solar Bank is authorized and is being implemented, its scope has been sharply reduced, and it is still opposed by the Administration.

Alcohol Fuels*

BACKGROUND

The use of alcohol instead of gasoline as an automotive fuel has been of interest periodically since the invention of the automobile. For the most part, the advocates of alcohol fuel have been motivated by a desire to find new markets for American farm products. In recent years, depressed prices for farm products have coincided with the perception of U.S. overdependence on foreign sources of petroleum, a perception fueled by the energy shortages of the 1970s. Alcohol fuel was seen as meeting both of these concerns, since it could be made from agricultural crops (in the U.S., primarily from corn) and was a "home-grown" motor fuel.

Legislation stimulating the growth of an alcohol fuels industry was enacted during the Carter Administration. The Energy Tax Act (P.L. 95-618) exempted automotive fuel containing at least 10-percent alcohol from the Federal excise tax on motor fuels of 4 cents per gallon. The Windfall Profit Tax Act (P.L. 96-223) extended this exemption through 1992 (it would otherwise have ended in 1984), and included other tax advantages for alcohol fuels. The Energy Security Act (P.L. 96-294) set up a comprehensive program of funding for alcohol fuels programs, with the emphasis on loan guarantees for alcohol fuel plant construction. Under this program, the Department of Energy was to administer the funding for large alcohol fuels plants, and the Department of Agriculture would be responsible for small facilities. The 1980 budget reconciliation bill (P.L. 96-499) established a tariff on imported alcohol climbing to 40 cents per gallon by 1983; this was to nullify the effect of the excise tax exemption for imported alcohol.

Stimulated by these governmental initiatives, and by an enthusiastic "gasohol" movement in the rural areas of the country, alcohol fuel sales increased rapidly. By 1981, 70 million gallons of alcohol were used as automotive fuel in the United States, and thousands of service stations offered the 10-percent "gasohol" blend for sale.

The Reagan Administration reversed the alcohol fuels policy of the previous administration. As with other "alternative" fuels, the philosophy of the new Administration was that alcohol fuels should stand or fall on their record in the marketplace, without assistance from the Government. Accordingly, they sought the rescission of the funds authorized for alcohol fuels projects by the Energy Security Act and other legislation. The excise tax exemption was allowed to remain, after suggestions that it be revoked met with an adverse reaction from the Congress.

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LEGISLATION ENACTED

In early 1981, the Administration proposed the rescission of $1.245 billion in loan guarantee funding authorized under the Energy Security Act. Congressional action on this request was included in the Supplemental Appropriations and Rescission Act of 1981 (P.L. 97-12) enacted in June 1981. The Congress agreed to rescind $724.5 million (58 percent of the total) and retained $520.5 million (42 percent). The retained funding was used primarily to award loan guarantees to eleven companies for large alcohol fuel projects, in the portion of the program administered by DOE.

In October 1982, P.L. 97-258, a bill allowing the Department of Agriculture to sell some of its surplus grain stocks for use in making fuel alcohol, was enacted into law. The alcohol produced by this program was to be used by Federal Government agencies, stored by the Government, or sold in the commercial market, in a manner that would not disrupt the price level in that market. For the near future, most of the alcohol fuel produced by this program was expected to be stored by the Government.

In December 1982, the Congress considered and ultimately passed H.R. 6211, the "Surface Transportation Assistance Act of 1982" (P.L. 97-424). Title V of this bill, the "Highway Revenue Act of 1982," raised the Federal excise tax on gasoline from 4 cents per gallon to 9 cents per gallon, effective April 1, 1983. The exemption for alcohol fuel was treated differently in the House and Senate versions of this legislation. The House bill would have exempted fuel containing 10 percent or more of alcohol from 4 cents of the 9-cent tax, thus keeping the same level of exemption as existed previously; it would have moved the termination date of this exemption from 1992 to 1988. The Senate bill would have allowed fuel containing 10 percent or more of alcohol to be exempted from the full 9 cents, and kept the termination date at 1992. The bill as enacted raised the exemption to 5 cents per gallon and kept the 1992 termination date. In keeping with this decision, the income tax credit for alcohol fuels (not allowable if the excise tax exemption is claimed) was raised from 40 to 50 cents per gallon, and the tariff on imported alcohol fuels was raised from 40 to 50 cents per gallon. The bill also included a new provision intended to stimulate the use of pure alcohol (not mixed with gasoline) as a fuel; this provision exempted fuel containing 85 percent or more of alcohol, derived from sources other than petroleum or natural gas, from the full 9 cents. This exemption terminates in 1988.

LEGISLATIVE INITIATIVES

In public statements in early 1982, the Administration suggested the removal of the four-cent per gallon excise tax exemption for alcohol fuels. The general opinion within the industry was that removal of the tax advantage, which is worth 40 cents on a gallon of alcohol used in the popular "gasohol" blend, would have destroyed the alcohol fuels industry. Strong opposition to this proposal was voiced by numerous Members of Congress, and the Administration elected not to send this proposal formally to the Congress. (Subsequently, the exemption was raised to 5 cents per gallon. See above.)

Generally, the 97th Congress had far less interest in the subject of alcohol fuels than did the 96th Congress. While the 96th Congress saw over 100 bills introduced relating to alcohol fuels, only about 20 such bills were introduced in the 97th Congress. Other than the enacted bills, none were the subject of hearings or other serious consideration.

MAJOR STUDIES

The National Alcohol Fuels Commission, which conducted a detailed 18-month study of the outlook for alcohol fuels in the United States, submitted its final report in January 1981, shortly after the beginning of the 97th Congress. The report, entitled "Fuel Alcohol: An Energy Alternative for the 1980's," was strongly in favor of an expanded alcohol fuels program. Its advice was contrary to the philosophy of the new Administration, which had just taken office, and the report appears to have been largely ignored.

PROSPECTS AND PENDING ISSUES

The most important issue facing the 98th Congress regarding the alcohol fuels program was the overriding question of whether the program should exist at all. The Reagan Administration would have ended the alcohol fuels program in the past two years, by rescinding all loan guarantee funding and ending the tax exemption, if the 97th Congress had not intervened. The Congress later demonstrated its continued interest in alcohol fuel by raising its excise tax exemption from 4 to 5 cents per gallon. As the Administration's views had not appreciably changed, the 98th Congress would have to act if it wished the program to continue.

Beyond the survival of the tax exemption and the remaining loan guarantee funding, alcohol fuel advocates were backing the concept of a "Strategic Alcohol Fuels Reserve," which would stockpile alcohol fuel for use in national emergencies. This would be an expansion of the program under P.L. 97-358, which will result in some Federal Government storage of alcohol fuel. Legislation to this effect will probably be considered by the 98th Congress. Methanol (wood alcohol), because of its extremely low cost and excellent performance as a fuel, will very likely be a subject of congressional interest as synthetic alternatives to imported oil are sought.

Wind Energy*

BACKGROUND

Rotational energy derived from the wind can be used directly (to pump water or grind grain), converted to heat, or used to operate a generator for producing electric power. Small wind systems which produce mechanical power for agricultural applications have been used in the United States and abroad for several decades. However, wind technology developments are currently focused on electric power production. In particular, there is an emphasis on the development of large systems for utility grid operation.

Oil import cutoffs in 1973 and 1979 prompted a growing Federal interest in the potential for wind-produced electrical power to reduce import vulnerability. Consequently, Congress passed the Wind Energy Systems Act (WESA, P.L. 96-345) in 1980, which called for an accelerated program of support for RD&D and commercialization of small machines for residential use and multimegawatt machines for utility use. The WESA conference report set out a total of $891 million for FY81 through FY88. 1/

The strategy of accelerated development may also be important for maintaining a competitive international market position. Steadily growing domestic and international

Table 1. Proposed WESA Budget for Wind Energy

FY81	FY82	FY83	FY84	FY86	FY86	FY87	FY88
$100	173	145	133	125	80	60	75

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* By Fred Sissine, Science Policy Research Division.

1/ U.S. Congress. House. Conference Committees, 1980. Wind Energy Systems Act. Conference Report to Accompany H.R. 5892. H. Rpt. 96-1217, 96th Cong., 2d Sess. Washington, U.S. Govt. Print. Off., 1980. p. 13.

markets for wind equipment have propted increased congressional interest in the potential for exports to improve the balance of trade. Sales of domestically produced equipment rose from $18.0 million in 1980 to $84.2 million in 1982, and total international sales rose from $63.2 million in 1980 to $161.5 million in 1982. 2/ Additionally, utility contracts for power from domestic windfarm developments currently total nearly one billion dollars. 3/

However, the Reagan Administration's strategy to reduce the Federal dificit has caused severe cutbacks in wind funding which, if continued, would constitute a de facto repeal of the WESA legislation. The initiation of these cutbacks coincides with Administration opposition to tax credits, judicial attacks on key regulatory incentives for implementation, and technical problems with DOE demonstrations of large machines. Meanwhile, European development of large machines are nearing the testing phase, and imports of small European machines are rising. Additionally, since wind-power technology is one of the first solar-electric technologies to enter the commercial phase, its development and implementation may affect support and acceptance of others. All of these considerations have combined to produce a mounting interest in Federal support for wind energy.

Funding

A Federal Wind Energy Program was first established in 1973 at the National Science Foundation, and is now administrered by the DOE Office of Conservation and Renewable Energy. Beginning with a budget of $200,000 in 1973, the Wind Program received nearly $290 million in steadily increasing appropriations through FY81.

Table 2. Federal Wind energy Appropriations

FY75	FY76	FY77	FY78	FY79	FY80	FY81	FY82
$7.9	19.3	24.6	35.3	59.6	63.4	77.5	34.4

2/ Personal communication with Ms. Robin Sacks, Strategies Unlimited, Mountain View, Calif., Jan. 1983.

3/ Personal communication with Mr. Michael Russo of Pacific Gas & Electric Co. and Mr. Robert Scheffler of Southern California Edison, Jan. 1983.

Following the specification of the Wind Energy Systems Act (WESA, P.L. 96-345) for an accelerated funding effort, an $85.8 million appropriation for the FY81 Wind Program was enacted under the Carter Administration. However, in March 1981, the Reagan Administration requested a $26.1 million rescission in the FY81 budget. The Congress approved (P.L. 97-12) only $8.3 million of the proposed rescission and deferred the remaining $17.8 million.

For FY82, the Reagan Administration requested an $18.3 million budget authorization for wind energy. However, Congress passed an appropriation of $35.4 million (P.L. 97-88). Most of the congressional addition to the Administration's request was for the development of the MOD-5 large-scale system.

Nevertheless, this appropriation represented a 59-percent drop from the FY81 appropriation before the rescission, and the Administration's $5.5 million FY83 request would amount to an additional reduction of 84 percent from the FY82 appropriation level. However, the 97th Congress rejected this move. This House and Senate Appropriations Committees recommended that $28.4 million be appropriated for wind energy in FY83. Nevertheless, this amounted to a 19-percent drop from the FY82 level. 4/

Technological Developments

The major strategy for the implementation of commercial (utility connected) wind energy facilities is known as a "windfarm." A windfarm involves the siting of multiple machines in groups or clusters. Several windfarms comprised mostly of 25-kilowatt (kw) machines are already operating, and others under development plan to use machines in the 25-kW to 100-kW range. However, DOE

4/ U.S. Congress. House. Committee on Energy and Water. Energy and Water Development Appropriation Bill, 1983. Report to Accompany H.R. 7145. House Report No. 97-850, 97th Cong. 2nd Sess., Sept., 21, 1982. Washington, U.S. Govt. Print. Off., 1982. p. 15-16; also see U.S. Congress. Senate. Committee on Appropriations. Subcommittee on Energy and Water. Energy and Water Appropriation Bill, 1983. Report to Accompany S. 3079. Senate Report No. 97-673, 97th Cong., 2nd Sess., Dec. 6 (legislative day, Nov. 30), 1982. Washington, U.S. Govt. Print. Off., 1982. p. 53-54.

and utilities expect that multi-megawatt machines will eventually become the backbone of windfarm developments. They believe that large machines will capture a greater amount of the wind potential, provide more cost-effective power production, and require less overall maintenance per megawatt than small machines with an equal amount of power producing capability.

Beginning with the MOD-OA (0.1 to 1.0 MW) experiments, Federal wind energy R&D on large systems for utility applications has progressed to field tests of the more advanced 2.5-MW MOD-2 machines. Furthermore, design work on the 6 to 7-MW MOD-5 machines is underway. Additionally, the early DOE work in large systems has stimulated some private sector activity in the development of 3-MW and 4MW machines. Nevertheless, DOE demonstrations of large machines have experienced some significant disappointments and delays.

Although the MOD-OA and MOD-1 machines never achieved their full rated power, DOE claims that the MOD-2 machines have. However, problems with a hydraulic system resulted in a June 1981 overspeed incident which shut down MOD-2 operations for several months. 5/ More recently, in January 1983, a big crack in the drive shaft shut down MOD-2 operations again. According to DOE, modifications in the shaft's construction, unaccounted for in the stress design, led to the breakdown, which took six months for review of the problem and for redesign, fabrication, and installation of a new shaft. Possibly of greater importance was the lack of information resulting from the delay in the design of the MOD-5 system. 6/

Another kind of wind energy system is being developed to reduce the fuel costs for commercial sea transport. It is referred to as "sail-assisted technology." A new generation of sail technologies have been used to aid the propulsion of tugboats, fishing vessels, oil tankers and large offshore oil drilling rigs. 7/

5/ U.S. DOE. Evaluation of Wind Turbine Performance. Sept. 8, 1982.

6/ Personal communication with Mr. Louis Divone, DOE Office of Solar Electric Technologies, Feb. 9, 1983.

7/ U.S. Congress. House. Committee on Appropriations. Energy and Water Appropriation Bill, 1983. H. Rpt. No. 97-850, 97th cong., 2nd Sess. Washington, U.S. Govt. Print. Off., Sept. 1982. p. 15; also see

Program Strategy

When the 97th Congress began, the Wind R&D Program was in the process of expanding, and had a definite emphasis on commercialization. At that time, small system (1 kW to 40 kW) demonstration and application tests were underway, and field tests of MOD-OA (200 kW) units were mid-stream. Also, field tests on the first megawatt-scale machine, the MOD-1 (2 MW) were progressing, and installation and testing of the MOD-2 (2.5 MW) machines had just begun. In addition to cost and performance of technology, program activities also included resource assessment, market analysis, information dissemination, and promotion of a wind industry infrastructure. 8/

The Federal strategy for implementing wind systems has rested on the avoided cost and interconnection provisions of the Public Utility Regulatory Policies Act (PURPA, P.L. 95-617) and the energy tax credit provided by the Crude Oil Windfall Profits Tax Act (WPA, P.L. 96-223). At the start of the 97th Congress, the rules promulgated by the Federal Energy Regulatory Commission (FERC) to implement PURPA were just beginning to have an impact on the market for wind energy. Similarly, the tax credit for wind was starting to be factored into private sector decisions regarding wind project implementation.

However, under the Reagan Administration, the basic character of the program has been shifting away from commercialization and market-related activities and instead has come to focus primarily on long-term R&D. The Administration has achieved this shift through the repeated initiation of cuts in Program funding. In justifying these changes, it points to growth in private sector wind activities. The Administration notes that manufacturers of small machines have come forth recently, and other firms are constructing and testing large turbines. Additionally, several new "third party" companies are now contracting with utilities to sell power from windfarms. 9/

Furthermore, the Administration notes that the Economic Recovery Tax Act (ERTA, 97-34) and the Tax Equity and Fiscal Responsibility Act (TEFRA, P.L. 97-248) contain

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8/ U.S. DOE. FY81 and FY82 Congressional Budget Requests.

9/ U.S. DOE. FY83 Congressional Budget Request, v. 2. (DOE/MA-0064) p. 47

provisions which should create adequate incentives for the continuation of wind system research, demonstration and commercialization in the private sector. Thus, for FY83, it asked only for a modest $5.5 million budget to continue basic research on stress mechanics 10/

LEGISLATIVE INITIATIVES

Administration initiatives for economic recovery and judicial action on the Public Utility Regulatory Policies Act (PURPA, P.L. 95-617) were the sources of most action

on wind energy during the 97th Congress. ERTA and TEFRA, the two major pieces of economic recovery legislation, contain provisions which affect wind system implementation. ERTA accelerates depreciation for wind equipment and has provisions for "safe-harbor" leasing which make it possible to "sell" the available wind tax credit benefits. TEFRA's "basis-adjustment" provision, however, reduces the value of the energy tax credit from 15 percent to 12 percent. Additionally, it repeals safe-harbor leasing for most transactions after the end of 1983. 11/

As another part of its strategy for economic recovery, the Administration has sought to reduce Federal spending. This effort has included major cutbacks in Wind Program funding levels. However, Congress has not agreed with all of its proposals for wind budget cutbacks.

In its report on the FY82 authorization for wind energy, the House Science and Technology Committee noted that its recommendation of $48.8 million exceeded the Administration's request by $29.4 million 12/ However,

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10/ Ibid.

11/ U.S. Congress. House. Committee on Science and Technology. Subcommittee on Energy Development and Applications. The Role of Business Incentives in the Development of Renewable Energy Technologies. Hearing, 97th Cong., 2nd Sess., July 13, 1982. U.S. Govt. Print Off., 1982 (Hereafter referred to as "House Tax Credit Hearing"); also see the Impact of Recent Federal Tax Legislation on the Renewable Energy Industry. Washington, Renewable Energy Institute, Nov. 4, 1982.

12/ U.S. Congress. House. Committee on Science and Technology. DOE Civilian R&D Programs and Projects 1982 Authorization Act. Report to Accompany H.R. 3146. H. Rpt. 97-94, 97th Cong. 1st Sess. Washington, U.S. Govt. Print. Off., 1981. p. 201-204. (Hereafter referred to as HST FY82 Authorization Report) it was also noted that this figure represents a $37-million reduction from the FY81 appropriation (before the rescission) and fall $124.2 million short of the FY82 level anticipated in the conference report on the Wind Energy Systems Act (P.L. 96-345). 13/ The committee's principal action was to increase the authorization for engineering development by $18.7 million, and earmark most of it for MOD-5 development and demonstration. Also, DOE was directed to secure cost sharing from Boeing for its MOD-2 effort and from General Electric and utilities for the MOD-5 effort. 14/

Later in the first session, the Omnibus Budget Reconciliation Act of 1981 (OBRA, P.L. 97-12) fixed the FY82, FY83 and FY84 authorization levels for wind energy at $48.8 million. 15/ Following the directive from OBRA, there was no FY83 authorization bill introduced. However, the House and Senate Appropriations Committees recommended only $28.4 million in appropriations for FY83. Nevertheless, this level was well above the Administration's request and would allow the MOD-5 effort to continue.

Other wind energy action during the first session of the 97th Congress was focused on amending PURPA to eliminate restrictions on utility ownership of wind facilities. 16/ Hearings were held on two of these bills by the House Energy and Commerce Committee, but neither bill was reported out of committee. 17/ Hearings were

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13/ U.S. Congress. House. Conference Committee, 1980. Wind Energy Systems Act of 1980. Conference Report to Accompany H.R. 5892. H. Rpt. 96-1217, 96th Cong., 2nd Sess. Washington, U.S. Govt. Print. Off., 1980.

14/ HST FY82 Authorization Report.

15/ U.S. Congress. House. conference Committees, 1981. Omnibus Reconciliation Act of 1981. Conference Report to Accompany H.R. 3982. H. Rpt. 97-208, 97th Cong., 1st Sess. Washington, U.S. Govt. Print. Off., 1981.

16/ H.R. 2876 (Alexander), H.R. 2992 (Heftel), S. 1517 (Matsunaga), S. 1869 (D'Amato), S. 1885 (Humphrey), S. 1977 (Johnston).

17/ U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy Conservation and Power. The utility Role in Cogeneration and Small Power Production (H.R. 2876 and H.R. 2992). Hearings, 97th Cong., 1981. (Hereafter "Ownership Hearing")

Action during the second session also focused on PURPA and other incentives for implementation. One bill (H.R. 6500) was introduced to resolve concerns raised by a Federal court decision which vacated PURPA avoided-cost and interconnection provisions. Hearings were held on this also held on one other bill by the Senate Energy Committee, but it was not reported from committee. 18/ Also, resolutions opposing repeal of wind energy tax credits were introduced. 19/

bill, but markup was cancelled. 20/ Also, hearings were held on a bill which proposed extension of the period of application of the energy credit for wind. 21/ At the end of the session, another bill was introduced to increase the amount of the energy credit and extend its period of application. 22/ Other legislation was introduced to provide subsidies for sail-assisted technology, 23/ and to increase R&D spending for energy storage systems that could be used with wind systems. 24/

PROSPECTS AND PENDING ISSUES

The most important policy questions involve support for R&D, incentives for implementation and the potential reaping strategic and economic benefits from current and developing technology. The Federal position regarding tax credit, budget, export and regulatory issues may significantly influence attainment of these benefits.

Tax Credit Issue

The Administration has expressed general opposition to targeted incentives for wind and other renewable energy systems. It has floated a proposal to repeal the existing credits, though it did not result in legislative action.

18/ U.S. Congress. Senate. Committee on Energy and Natural Resources. Subcommittee on Energy Regulation. Public Utility Regulatory Policies Act Amendments (Parts I and II) [S. 1885 and S. 1966] Hearings, 97th cong., 2nd Sess., April 19 and 24, 1982. Washington, U.S. Govt. Print. Off., (Hereafter "Senate Ownership Hearing")

19/ H. Res. 243 (Harkin), S. Res. 232 (Chafee).

20/ U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy Conservation and Power. Cogeneration and Small Power Production. Hearing, 97th Cong., 2nd Sess., June 15, 1982. Washington, U.S. Govt. Print. Offer., 1982. (Hereafter "Clarification Hearing")

21/ House Tax Credit Hearings.

22/ H.R. 7268 (Heftel)

23/ H.R. 1774 (Studds), S. 1356 (Warner)

24/ S. 731 (Glenn)

The effectiveness of all Federal incentives for wind energy has been eroded by external economic forces such as high capital costs and sagging oil prices. Representatives of the private sector argue that: (1) tax credit uncertainties derived from the IRS delay in implementing regulations, attacks on the credit by the Administration, and an early expiration date have impeded the tax credit as a factor in management decisions on wind projects, (2) the present cutoff date is already bumping into the limits of corporate planning for large projects such as windfarms, (3) uncertainty about the PURPA incentives has increased the significance of tax credits as an incentive for wind, and (4) ERTA and TEFRA provisions may have actually reduced the credit's incentive effect and caused the cancellation of some projects.

Budget Issue

WESA calls for accelerated funding levels for wind energy during FY83 through FY88. However, the Reagan Administration has initiated significant reductions in wind funding during FY81 and FY82, and proposed a $5.5 million close-out budget for FY83. Although Congress appears to reject such a move at this time, continuation of the Administration's budget cutting efforts may act as a de facto repeal of WESA. The potential for a growing wind industry to contribute to economic recovery is likely to make the budget a continuing point of debate in the 98th Congress.

Export Issue

Budget cutbacks may have put the U.S. in a position where its technical and market leads may be jeopardized by heavily subsidized foreign competition. 25/ In direct contrast to the U.S. program, the Europeans and Japanese are maintaining or increasing their funding, broading their support programs, and increasingly emphasizing export markets. U.S. technical assistance and banking agencies do provide some support to firms interested in export markets. However, U.S. export performance may be hindered by policies which limit export licensing, prevent

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25/ U.S. Congress. House. Committee on Science and Technology. Subcommittee on Energy Development and Applications, jointly with Subcommittee on Investigations and Oversight. U.S. Solar and Conservation Technologies in International Markets. Hearings, 97th Cong., 2nd Sess., June 3, 17, and 21, 1982. Washington, U.S. Govt. Print. Off. (In press) the formation of export trading companies, and underemphasize assistance to small business. The potential for wind equipment exports to improve the balance of trade deficit is likely to stimulate some legislative activity during the 98th Congress.

Regulatory Issue: Utility Ownership

Capital assests classified as "public utility property" are generally not eligible for the energy tax credit, and may also receive much less favorable treatment under the new accelerated depreciation system. PURPA provides an exemption from this classification for wind facilities which qualify under FERC rules as small power producers. However, PURPA also limits utilities to 50-percent ownership of any wind-power facility which attempts to qualify as a small power producer. Utilities argue that this provision reduces the economic attractiveness of wind power and discriminates against them by allowing special tax benefits for nonutility owners. They indicate that removal of this limitation would enhance their involvement with wind energy. Opponents argue that its removal would violate PURPA's intent to deregulate power production and facilitate anticompetitive effects through utilities' creation of unregulated subsidiaries. 26/ this issue emerged during the first session, and shaped most of the legislative activities in the second session. It may also have provided much of the basis for the judicial activities that took place during the second session. This issue may demand further legislative activity in the 98th Congress.

Regulatory Issue: Avoided Cost and Interconnection

Legislative action on wind energy during the 97th Congress was overshadowed by Federal court and Supreme Court decisions affecting the small power provisions of PURPA. According to the Federal Energy Regulatory Commission (FERC), the avoided-cost and interconnection provisions have been very significant incentives for the implementation of wind energy systems. However, a Federal District Court in Mississippi found PURPA unconstitutional in early 1981. this decision was overturned by the Supreme Court in its review of the case on June 1, 1982. 27/ A second challenge, initiated by a group of utilities, led to a January 1982 D.C. Court of Appeals decision to vacate the avoided cost and interconnection provisions. 28/ Upon appeal from FERC, the Supreme Court decided on Oct. 12, 1982 to review this case. 29/ However, the Court is not likely

to hear the case before May 1983, and a decision is not expected before late 1983. Although the lower court's decision is not binding, FERC reports that it is dampening the effect of the incentives during the interim. Legislative attempts during the 97th Congress to resolve the lower court's concerns about the legitimacy of the incentives and ambiguities in their specifications for implementation did not succeed.30/ Further congressional action on this issue is not likely before the Court's decision.

Filing Fee Issue

FERC has proposed the establishment of user fees for small wind-power producers who wish to interconnect with a utility grid. According to the proposal, interconnection could cost as much as $52,000. FERC claims the fees would raise necessary revenues. However, the fees have generated considerable opposition. Opponents argue that the fees could, in many cases, be higher than the cost of the power generation equipment and would therefore consitute an unfair burden. 31/ On Nov. 1, 1982, the Justice Department filed comments with FERC in opposition to the proposed fee. Congressional action on this issue is not likely unless the Supreme Court decides against FERC in the pending PURPA interconnection case. 32/

27/ Ownership Hearing.

28/ American Electric Power Service Corp. v. FERC, No. 80-1789.

29/ FERC v. AEP, No. 82-226.

30/ See Clarification Hearing and Senate Ownership Hearing.

31/ Inside Energy, Nov. 1, 1982. p. 10.

32/ Personal communication with Tom Gray, American Wind Association, Dec. 1982.

Geothermal Energy*

BACKGROUND

The primary use of geothermal resources is for the generation of electricity. In the United States, since the first generator went on stream in The Geysers geothermal field in 1960, geothermal electric power production capacity has increased to over 1,000 megawatts. Nonelectrical applications of geothermal energy include space heating for residential, industrial, and agricultural purposes.

The U.S. Geological Survey estimates that as much as 3.4 million acres of land, mostly within the western one-third of the United States, including Hawaii and Alaska, are geologically favorable for geothermal development. Most of the potentially favorable sites are on Federal or public lands.

The basic authorizing legislation for the leasing of Federal or public lands for geothermal resources development is the Geothermal Steam Act of 1970, P.L. 91-581. This Act authorizes the Secretary of the Interior to issue leases for geothermal resources development and provides for the size of the lease, conversion rights, rents and royalties, duration of the lease, readjustment of lease terms, beneficial uses of water, and ownership of geothermal steam in surface patents. In addition to establishing lease terms and conditions, the Act defined two kinds of areas: Known Geothermal Resource Areas (KGRAs) which are leased to the highest bidder, and all other areas (leased by application). However, the implementation of this Act and the geothermal leasing of Federal lands have not proceeded in a timely fashion. Leasing reform legislation passed both Houses in the 96th Congress but failed to reach conference before adjournment. Similar measures were introduced into the 97th Congress.

In general, research and development in geothermal energy is conducted under provisions of the Geothermal Energy Research, Development, and Demonstration Act of 1974 (P.L. 93-410). The Geothermal Energy RD&D Act provided for the conduct of research, development and demonstrations in technologies for the utilization of geothermal resources and established a loan guarantee program for the financing of geothermal energy development. Legislation was enacted in the 96th Congress to amend the Geothermal Energy RD&D Act in an attempt to accelerate the development and commercialization of geothermal energy (P.L. 96-294).

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*Prepared by James E. Mielke, Science Policy Research Division.

A statute related to geothermal energy development that was affected by legislation passed in the 97th Congress was the Crude Oil Windfall Profits Tax Act (P.L. 96-223). This Act contained provisions expanding the 10-percent business energy investment credit provided in the Energy Act Tax Act of 1978 to a 15-percent energy tax credit for equipment used to produce, distribute, or capture geothermal energy.

LEGISLATION ENACTED

The 97th Congress completed legislation modifying the energy tax credits for geothermal development and passed appropriations for geothermal energy research and development, but left the major area of legislative focus on geothermal resources, leasing reform, still pending. Although the energy tax credit for geothermal energy development is available through December 31, 1985, the Tax Equity and Fiscal Responsibility Act of 1982 (P.L. 97-248) effectively reduces the real value of this credit by approximately 20 percent. Thus, the 15-percent geothermal credit would be worth approximately 12 percent. This reduction is accomplished by a provision in the Act that reduces the basis (cost) of an asset used for depreciation purposes by half the amount of any energy or investment credit claimed for the asset. While P.L. 97-248 cut back the effective value of all energy tax credits, Administration proposals to eliminate entirely the renewable energy and conservation tax credits ran into strong congressional opposition.

In other action, Congress deferred $9.5 million in the FY81 geothermal program in the Department of Energy by the FY81 Supplemental Appropriation and Rescission Act (P.L. 97-12). Funds to continue the geothermal energy development program were appropriated in the FY82 Energy and Water Development appropriations bill, H.R. 4144, at a level of $65.066 million, including $15.730 million for plant and capital equipment and $2.220 million for the Geothermal Resources Development Fund (P.L. 97-88). Under general reduction authority, interprogram adjustments at DOE reduced the final amount to $55.754 million. H.J. Res. 631 (P.L. 97-377) continued for FY83, the amount at which geothermal activities were conducted in FY82.

LEGISLATIVE INITIATIVES

Legislation (S. 1516/H.R. 4067) was considered in the 97th Congress to update and amend the leasing and permitting provisions of the Geothermal Steam Act. The legislation contained sections dealing with acreage limitations, diligence requirements, change of KGRA definition, competitive interest restriction in KGRAs, extension of lease renewal period, and drilling near thermal features in national parks. Actions aimed at expediting the geothermal leasing program in the Department of the Interior were ordered by Secretary Watt to complement the geothermal leasing legislation under consideration by Congress. The directives included setting time limits for processing noncompetitive lease applications, holding competitive lease sales for all unleased KGRAs, and implementing a simultaneous leasing procedure to allow relinquished leases to be reoffered. Further, it was reaffirmed that there would be no geothermal leasing within a National Park and that strict monitoring procedures would be conducted on any geothermal leasing proposals for lands in the vicinity of National Parks. The directives also announced the intention to allow carefully limited geothermal exploration activities, with proper safeguards, in areas under study for possible wilderness designation. On August 12, 1982, the House voted for a permanent ban of oil, gas, mineral, and geothermal leasing on all existing and candidate wilderness lands (H.R. 6542), except in cases where the President determines there is an urgent national need and Congress concurs. The companion bill, S. 2801, had wide support in the Senate, but did not reach the floor. Subsequently, these provisions were included as an amendment to the Department of the Interior Appropriations Bill, H.R. 7356, which passed the Senate on December 14, 1982. With the prohibition on wilderness leasing tied to the FY83 appropriations measures and extending through the end of FY83, only three months would be left until the 1964 Wilderness Act takes effect, barring any new oil, gas, minerals, and geothermal leasing in wilderness areas after December 1983.

The Administration requested $9.8 million for DOE's geothermal energy program in FY83 to conduct R&D in geochemistry, geosciences, and energy conversion with particular application to lower temperature resources. Orderly termination of the hot dry rock program and completion of Government involvment in the geopressured resources development is planned. No new loans would be available through the Geothermal Resources Development Fund, although $75,000 has been requested for monitoring of current outstanding loans. The House allowed an FY83 appropriation of $49.6 million for geothermal energy in H.R. 7145, the Energy and Water Development Appropriation Bill for FY83. The Senate Appropriations Committee recommended an appropriation of $39.2 million. While the continuing resolution, H.J. Res. 631 (P.L. 97-377) appropriated funding levels for geothermal research and development will continue to be an issue.

Legislation was also introduced in the 97th Congress to define geothermal energy more broadly for the purpose of gaining tax credits for ground water heat pumps.

PROSPECTS AND PENDING ISSUES

The 97th Congress left pending a number of amendments to the Geothermal Steam Act. Despite the initiatives undertaken by the Secretary of the Interior and the provisions Congress included in the Department of Interior Appropriations Bill, the 98th Congress may wish to re-examine this question in view of the support leasing amending legislation has previously gained.

The Administration may again seek to eliminate, renewable energy and conservation tax credits. Renewed efforts might be expected in the 98th Congress to eliminate the business energy tax credits altogether, or at least not to renew some that are due to expire and seek faster phase out for others. On the other hand, Congress may wish to consider extending energy tax credits to ground water heat pumps or possibly to heat pumps in general.

Appropriate funding levels and scope of Federal programs for geothermal research and development will continue to be an issue of congressional concern.

Ocean Thermal Energy Conversion (OTEC)*

BACKGROUND

In 1980, legal uncertainties were at or near the top of the list of barriers to development and emergence of a commercial Ocean Thermal Energy Conversion (OTEC) industry. The OTEC Act of 1980 (P.L. 96-320) established a legal regime that permits and seeks to encourage private OTEC development. The National Oceanic and Atmospheric Administration (NOAA) in the U.S. Department of Commerce is actively engaged in helping private companies learn the rules and in making preparations for licensing of commercial OTEC plants. The OTEC Act broke new ground in developing a hybrid system of law by applying for the first time the maritime version of property registration (Coast Guard documentation) and maritime financing laws (Ship Mortgage Act of 1920; Title XI obligation guarantees under the Merchant Marine Act of 1936; and capital construction fund tax treatment) to platforms permanently affixed to the ocean bottom. The OTEC Act also established a fully coordinated and streamlined licensing system. NOAA issued its official OTEC Licensing Regulations to implement the act on July 31, 1981, accompanied by an environmental impact statement and a regulatory flexibility analysis.1/,2/,3/ The combination of detailed pre-application consultations, single-point application for Federal permits, consolidated environmental impact statement and public hearings, and inclusion of representatives of state and local government permitting agencies in a consolidated application review process amounts to an experiment in simplification and streamlining of a complicated regulatory process.

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*By John Justus, Science Policy Research Division.

1/ Licensing of Ocean Thermal Energy Conversion Facilities and Plantships; Final Rule. Federal Register, v. 46, no. 147,1 part 4, Jul. 31, 1981: 39388-39420.

2/ U.S. Department of Commerce. Office of Ocean Minerals and Energy. Final Environmental Impact Statement for Commercial Ocean Thermal Energy Conversion Licensing. Washington, National Oceanic and Atmospheric Administration [U.S. Govt. Print. Off.] 1981. 1 v. (various pagings)

3/ Final Regulatory Impact Analysis and Final Regulatory Flexibility Analysis for Regulations to Implement Public Law 96-320, The OTEC Act of 1980. Washington, National Oceanic and Atmospheric Administration, 1981. 34 p.

LEGISLATION ENACTED

Legislation formally known as the Economic Recovery Tax Act of 1981 (P.L. 97-34) established a simplified depreciation system (known as Accelerated Cost Recovery), greatly liberalized equipment leasing rules (which could stimulate lease-financing transactions), and provided tax credits for research and development cost relating to the development of new products or technologies.

The Crude Oil Windfall Profit Tax Act of 1980 (P.L. 96-223) added to the 10-percent investment tax credit generally available an additional 15-percent nonrefundable business energy investment credit for OTEC equipment at two sites. This credit is available through 1985, but the Tax Equity and Fiscal Responsibility Act of 1982 (P.L. 97-248) in effect reduces the real value of the credit by approximately 20 percent, so that the 15-percent solar OTEC credit would be worth approximately 12 percent. This is accomplished by a provision in the act that reduces the basis (or cost) of an asset used for depreciation purposes by half the amount of any energy or investment credit claimed for the asset.

LEGISLATIVE INITIATIVES

Numerous bills were introduced in the 97th Congress dealing with the subject of renewable energy technologies, and several of these concerned ocean thermal energy conversion. H.R. 5524 (Heftel) and S. 2096 (Inouye) directed the Secretary of Transportation to transfer the ship OTEC-1/S.S. Ocean Energy Converter to the State of Hawaii for its use in continuing a program of at-sea heat transfer testing and systems experiments and ocean engineering research. H.R. 6735 (Fuqua) and H.R. 6736 (Fish) were introduced to extend until Dec. 31, 1990, the business energy investment tax credit for solar, wind, geothermal and ocean thermal property. S. 1517 (Matsunaga) would have amended the Internal Revenue Code to permit public utility property which otherwise qualifies as solar, wind, geothermal, or ocean thermal energy property to be treated as such for purposes of the business energy investment tax credit. Several sense-of-the-Congress resolutions were introduced in the House and in the Senate to express support for continuation of Federal funding for energy conservation and renewable energy resources [H.Res. 409 (Ottinger) / S.Res. 355 (DeConcini)] and for continuation and/or extension of the tax incentives for energy conservation and renewable energy sources [H.Res. 243 (Harkin) / S.Res. 232 (Chafee)].

MAJOR REPORTS AND STUDIES

The General Accounting Office expressed its concern that the Department of Energy cutback in OTEC funding would impede full development of OTEC's potential to the United States. In a report to then-Secretary of Energy James B. Edwards, GAO criticized DOE for limiting its view to interim goals of the OTEC program. GAO worried that, by concentrating on the floating/moored plant concept using the closed power cycle to produce baseload electricity for an island power grid, the agency would overlook other OTEC alternatives which might be better adapted to other locations. GAO questioned the DOE decision to cut funding for the OTEC program. Relying on the private sector to breach the gap may work if private firms can obtain necessary financing, noted GAO, but the report pointed out that there remain a number of OTEC alternative systems and components which are still in the research phase and involve long-term, high-risk research not likely to receive substantial support from private firms.4/

PROSPECTS AND PENDING ISSUES

A number of changes have been made in tax law in the last few years, and each of those changes creates an incentive or a disincentive that will affect the behavior of corporations and investors. In addition to understanding broad changes in tax policy, congressional oversight committees may seek to determine the degree of effectiveness of the several tax and financing provisions passed in recent years that apply specifically to OTEC projects: the 15 percent solar-energy tax credit for OTEC plants, Maritime Administration obligation guarantees for commercial and demonstration OTEC plant, and the availability of capital construction fund tax treatment. These specific OTEC provisions have not yet been used, and concerned congressional committees may need to seek and obtain agency rulings to increase the certainty about when and how they can best be used in an OTEC project. While P.L. 97-248 effectively cut back the value of all energy tax credits, Administration proposals to eliminate the renewable energy and conservation tax credits ran squarely into congressional opposition. Renewed efforts might be expected in the 98th Congress to eliminate the business energy tax credits altogether or at least not to renew some that are due to expire or seek a faster phase out for others.

4/ U.S. General Accounting Office. Full Development of OTEC's Potential May be Impeded; Report to the Secretary of Energy. EMD-81-62, April 10, 1981. Washington, D.C. 20 p.

While OTEC can play a major role in generation of electricity and the manufacture of energy-intensive products in the United States, development of export markets for U.S. OTEC plants with oil dependent countries that have excellent OTEC sites could have major beneficial impact on the U.S. balance of trade and on the U.S. economy as a whole. Investigating this export market potential and the economic benefits related thereto may be an appropriate subject for congressional oversight. In order to take advantage of OTEC export opportunities, OTEC supporters in Congress and the industrial community will need to become familiar with the Federal Government's export promotion policies and assistance programs, financing procedures for large export contracts, and export marketing techniques. This includes knowing when to take advantage of special Government emphases on particular types of trade or on special geographic areas, such as the Reagan Administration's Caribbean Basin initiative.

The changing nature of the electric utility industry is part of the business environment in which OTEC will either succeed or fail. If substantial deregulation of the electric utility industry were to occur, electric utility companies would then shift from the regulation mentality (in which they focus on the regulator) to a market-oriented mentality (in which they focus on the ultimate customer). OTEC sponsors in Congress may find it beneficial through oversight hearings to gain a better understanding of these broad changes in the utility industry, including the effects of fuel price adjustment clauses, avoided cost calculations, and other details of utility regulation.

CHAPTER VI. ENERGY CONSERVATION POLICY

Introduction*

Upon taking office in 1981, the Reagan Administration sought to impose a fundamental shift on Federal policies for energy conservation. Since the oil embargo of 1973, previous Administrations had promoted a steadily increasing involvement by the Federal Government in activities to facilitate and promote energy conservation. These efforts were largely predicated on a consensus of opinion that energy conservation offers the most certain and least costly means of alleviating the energy crisis but that a number of economic barriers exist to thwart the development and adoption of energy-saving technologies. In the absence of a vigorous Federal effort to overcome such barriers, it was reasoned, energy conservation would fail to develop at a satisfactory rate to protect national interests.

In the Reagan Administration view, energy conservation would proceed at necessary speed under the stimulus of energy prices alone, without the assistance of Federal regulations on energy efficiency; without a concerted Federal effort to develop and commercialize new energy conservation technologies; and without programs offering financial assistance or incentives to households and firms to adopt energy-saving technologies. The Reagan policy has been that Federal programs should primarily be limited to the conduct of research and development on long-term projects having a high risk of failure, but high potential payoff--projects of little immediate interest to industry, but of potential future importance to energy conservation.

The 97th Congress did not concur with these Administration policies, as evidenced both by its failure to adopt the Reagan proposals to eliminate funds for most energy conservation programs and by the fact that it did not seek to revise the basic provisions of the legislation which mandated these programs. Even in the face of considerable sentiment in Congress for budget cutting, Congress chose to reject Administration budget proposals and to maintain the structure of existing energy conservation programs intact, but at reduced funding levels.

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*By Langdon T. Crane, Science Policy Research Division.

The Conservation Budget*

BACKGROUND

Beginning with the 94th Congress and continuing with each succeeding Congress, four major bills were enacted containing a number of energy conservation programs. The Acts were: the Energy Policy and Conservation Act (P.L. 94-163), the Energy Conservation and Production Act (P.L. 95-385), the National Energy Conservation Act (P.L. 95-619), and the Energy Security Act (P.L. 96-294). Most of the programs were voluntary in nature and were placed in the Department of Energy (DOE) for implementation. Notable exceptions included the Building Energy Performance Standards (BEPS) and the Solar Energy and Energy Conservation Bill, both of which would be administered by the Department of Housing and Urban Development (HUD).

In line with its energy philosophy and economic program, the Administration recommended the wholesale elimination of many conservation programs, including State grant programs, the Residential Conservation Service, Industrial conservation programs, and several research and devleopment programs. For FY82, the President recommended $104 million for conservation, compared with $865 million enacted for FY81. For FY83, this request would drop to $22 million.

LEGISLATION COMPLETED

As would be expected, given the severity of the Administration's budget requests for conservation, funding levels and, indeed, the survival of many conservation programs were the focus of debate during the 97th Congress. In general, the Congress accepted the need for conservation programs to shoulder their fair share of financial responsibility, but resisted attempts to eliminate various conservation programs they felt were necessary to continue a viable conservation effort.

Table 1 summarizes the budgetary action recommended by the President and enacted by the 97th Congress. Congress avoided increasing the budget report and utilizing FY81 budget authority. FY82 appropriations totalling $145.4 million in new budget authority, combined with FY81 deferrals of $240.8 million, permitted the Congress to "save" most of the conservation programs targetted for termination by the

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Administration. These programs included the Residential Conservation Service, community systems programs, consumer products (including appliance standards), industrial energy conservation programs, State grant programs (including Weatherization) and appropriate technology programs.

This ability to utilize deferred funds from the large FY81 appropriations was not as available in FY83. In FY83, the President recommended even less for conservation, and slated more programs for termination than in FY82. The Congress responded by constructing its own conservation budget with $279.3 million in new budget authority and $88 million in other funds to provide $367.3 million in total budget authority for conservation, compared with $21.8 million requested by the Administration. As with the previous year, the Congress "saved" the programs slated for elimination by the Administration, although it was at a significantly reduced funding level.

The only major nonbudgetary conservation-related legislation to be passed in the 97th Congress was contained in the Omnibus Reconciliation Act of 1981. Besides providing DOE with its first authorization since inception of the Department, the legislation also provided for voluntary, rather than mandatory, compliance for BEPS, except for Federal buildings.

LEGISLATIVE INITIATIVES

As indicated earlier, the budget dominated the debate on conservation programs. Conservation proponents spent most of their time in the 97th Congress defending their program gains under previous Administrations. Few new initiatives were introduced.

This general lack of initiatives should not be construed as a lack of interest in conservation. During the 97th Congress, a House resolution (H.R. 409) calling for restoration of energy conservation (and other DOE program) funds attracted 178 sponsors. In addition, Senate Res. 355, calling for continued Federal support for energy conservation, had 46 sponsors. Neither of these rsolutions, however, was put to a vote.

PROSPECTS AND PENDING ISSUES

It is likely that Federal financial support for conservation will continue to be the focus of debate during the 98th Congress. With a Congress apparently determined to maintain the funding levels of conservation programs at some minimal level, the question is whether or not Secretary Hodel will take this support as an opportunity to close the gap between the Administration and the Congress on conservation funding by increasing the Administration request. If the Secretary chooses to raise the DOE budget request to a more acceptable level, the 98th Congress may not have to go through the process of virtually writing its own budget, as it did in the 97th Congress. If the Secretary chooses not to increase the request, the Congress appears prepared to continue its own path in conservation funding.

Solar Energy and Energy Conservation Bank*

BACKGROUND

The Solar Energy and Energy Conservation Bank was created during the Carter Administration in the last quarter of the 96th Congress. Two and one-half years later the 97th Congress ended, and the Bank had still not made one loan or grant. Why it had not is a reflection of the Reagan Administration's philosophy of fiscal restraint and less Federal involvement in energy matters, and a more conservative 97th Congress willing to back up that philosophy.

When it was created in June 1980 by the Energy Security Act (P.L. 96-294), the purpose of the Bank was to provide financial assistance to decrease the cost of financing conservation and solar energy systems to homeowners, tenants, small businesses and agricultural concerns. Subsidies were to be provided through grants and below market-rate loans. The amount of assistance and the type would be determined by the applicant's income. Authorized funding was to grow from $300 million in FY 1981 to $1.025 billion in FY 1983. The total amount authorized through FY 1984 was $3.025 billion ($2.5 billion for conservation, $525 million for solar).

Since the Bank would serve already established markets for conservation improvements and solar energy systems, the Reagan Administration concluded that bank subsidies would be, at least in part, simply financial windfalls to many recipients of the assistance. Conservation and solar were existing or near-term energy technologies which, in keeping with Reagan Administration philosophy, should not be accorded Federal assistance. Consequently, soon after taking office, the new Administration acted to terminate the Bank permanently before it could be implemented. Implementation activities begun during the Carter Administration and nearing completion were suspended by the new Secretary of Housing and Urban Development (HUD), Samuel Pierce, in early 1981. The Administration asked for and received congressional approval to rescind $122 million of the $122.25 million that had been appropriated to the Bank for FY 1981 under the Carter Administration. These two actions ended any chance for implementation in FY 1981. Succeeding steps toward termination were not as easy or as successful for the Administration, however. It became apparent early in the FY 1982 budget process that Congress was dedicated to the establishment of the Bank, although it did agree to a substantial curtailment of the Bank's scope of operations.

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LEGISLATIVE INITIATIVES

The struggle between the 97th Congress and the Administration over the termination of the Bank was carried out in annual budget reviews beginning with the FY 1982 budget process:

FY 1982 Authorizations (P.L. 97-35). The Omnibus Budget Reconciliation Act of 1981, which reauthorized Bank funding for FY 1981-83, was both a victory and a defeat for the Bank. By reauthorizing the Bank at $50 million per year for the three fiscal years 1982-84, the Act was a victory for Congress over the Administration's zero budget request, which would have terminated the Bank. However, the amount reauthorized was only a fraction of the original authorization--$150 million, compared to $3.025 billion. This would mean a major redefinition of the scope of the Bank and a substantial curtailment of the limits within which the Bank could be expected to operate. In this sense, the Act was a defeat for Bank supporters who envisioned the Bank as a major incentive program for conservation and solar installations.

FY 1982 Appropriations (P.L. 97-101). The Republican Senate and Democratic House split along party lines over the FY 1982 Bank appropriation. The Senate supported the Administration and approved a zero budget, while the House approved an appropriation of $50 million, matching the amount authorized in the Budget Reconciliation Act. A conference split the difference and approved an FY 1982 appropriation of $25 million. However, a Senate amendment to the conference bill, which the House subsequently agreed to, reduced the appropriation to $22 million.

FY 1983 Budget Process. The Administration continued its efforts to terminate the Bank by requesting that zero funds be appropriated in FY 1983 and that the FY 1982 appropriation be rescinded.

Pressure from both inside and outside of Congress to force the Administration to spend the FY 1982 appropriation and implement the Bank were stymied by the rescission request. Without specification by Congress, the Administration was within its authority to delay any implementation activity for 45 legislative days following the request (until about the end of April 1982). No specific action was taken, and the deadlined passed, meaning that the request was denied. The Administration could then have requested that the FY 1982 funds be deferred, which would have required specific action by Congress, but it elected not to do so.

With respect to the FY 1983 appropriation, the House and Senate were again in disagreement over the funding level, but for the first time the appropriations committees of both Houses recommended that the Bank be funded. The House recommended $25 million for FY 1983, while the Senate recommended $15 million; $20 million was agreed to in compromise legislation (P.L. 97-272). Bank supporters see the Senate action as a message to the Administration that even the Republican Senate will no longer support termination efforts. The $22 million not spent in FY 1982 was combined with the FY 1983 appropriation, making $42 million available to the Bank in FY 1983.

Start-up Activity in the 97th Congress. In the first week of May 1982, soon after Congress had rejected the rescission request, HUD took its first steps toward implementing the Bank by designating interim officials to begin start-up activities. Just prior to that, the Office of Management and Budget (OMB) released the FY 1982 Bank appropriation. On August 27, 1982, HUD issued a solicitation of funding proposals directed at States and U.S. territories (Fed. Register, vol. 47, no. 167, pp. 37960-37966). Based on the responses it received, HUD revised the Bank operating regulations that had been developed during the Carter Administration. The revised regulations were then submitted to the banking committees of the House and Senate late in the 97th Congress. Congressional approval of the regulations is the required final step necessary for implementation. The House Committee on Banking and Housing objected to certain procedures in the proposed regulations, however, sending them back to HUD with specific changes requested. Prompt action by HUD is expected early in the 98th Congress which should clear the final obstacle to the Bank's implementation.

Lawsuit Filed. On April 7, 1982, about three weeks before the Administration's deadline on the rescission request, a coalition of solar groups, financial institutions, States, private citizens, and Members of Congress filed suit in the U.S. District Court for the Southern District of New York, charging that the President and five cabinet members were illegally withholding FY 1982 Bank funds. The appointment of interim Bank officials by HUD and the release of the FY 1982 appropriation by OMB would appear to have rendered the court action moot, but the coalition continued with the suit anyway, seeking declaratory judgment on certain impoundment issues. The Court ruled in favor of the coalition in late June 1982, placing HUD under court order to expedite the program as quickly as possible. A separate motion to force HUD to issue the operating regulations necessary to implement the Bank by November 15, 1982, was rejected by the court on October 19, 1982, on the grounds that there was no evidence that HUD was abusing its administrative authority.

PROSPECTS AND PENDING ISSUES

The Omnibus Budget Reconciliation Act and the HUD solicitation to the States have major policy implications for the Solar Energy and Energy Conservation Bank:

The Budget Act so reduced the funding ceiling for the Bank that it is now unlikely that the Bank will be an effective program for bringing conservation and solar improvements to the population groups targeted by the original legislation. Also, since the Act only reauthorized the Bank through FY 1984, it is unclear whether Congress wanted the program to go beyond that time. HUD may operate under the assumption that Congress did not want the program to go beyond FY 1984.

The HUD solicitation indicates a significant departure from how the Bank was originally expected to operate. Instead of working directly with banks, utilities, nonprofit entities and other appropriate lending institutions, the Bank will channel all funds to States and U.S. territories with approved programs for disbursing the funds. HUD was expecting 20 to 30 responses to its proposal; instead, 48 States, the District of Columbia and four U.S. territories responded. With 53 entities participating in the program, the $42 million available in FY 1983 will be spread quite thin, and much of the money may be lost to administrative overhead. Because their experience with a program of this type may be limited, questions have been raised regarding the States' ability to disburse the funds judiciously. Other questions have been raised concerning the exclusion of active solar heating and hot water systems and solar electric systems from the program. Assistance for this technology was a prominent feature for the original program.

R&D and the Federal Role*

BACKGROUND

With its inauguration in 1981, the Reagan Administration sought to implement a policy of transferring responsibility for energy conservation R&D entirely to the private sector, except for those projects having a potential for major long-term energy payoffs but posing short-term financial risks or having development periods too great to be of interest to industry. The Reagan philosophy was that energy prices, if unregulated, ought to provide adequate stimuli for industry to develop needed energy conserving technologies and products to meet the private demand for ways to reduce energy costs. By relying on economics rather than regulation and other forms of Federal intervention to promote energy conservation, Reagan sought to relieve the Government of the expense of conservation R&D and to free private industry from the constraints of former Federal programs and policies. This view was largely counter to the conclusions of the Ford and Carter Administrations, that numerous market imperfections and barriers exist to inhibit progress in energy conservation. The Reagan policies were designed to terminate the many Federal programs, particularly those aimed at developing new energy conserving technologies and processes under Government sponsorship, that had been designed under previous administrations to overcome these imperfections and barriers.

DOE's energy conservation programs, however, could not be terminated unilaterally by the Administration because they had been mandated by legislation. Rather than seeking repeal of that extensive legislation, the Administration elected the alternative of seeking zero-fund appropriations for the programs to be terminated. Shortly after the inauguration, the Reagan Administration submitted a budget request for energy conservation R&D in FY82 that was sharply reduced from the Carter-prepared budget request which had been submitted to Congress. This revised request for FY82 requested zero funds for seven of the nine programs in the Buildings and Community Systems effort and for all four of the Industrial Energy Conservation programs in the Department of Energy. DOE's Transportation research programs fared somewhat better. None of the five programs was earmarked for a zero-fund appropriation, though sharp reductions in fund requests were submitted for all programs with the exception of the alternative fuels program, which was to receive about 75 percent of its FY81 funds under the Reagan request.

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*By Langdon T. Crane, Science Policy Research Division.

Congress did not endorse the Reagan zero-fund budget requests for these energy conservation R&D programs in FY82. The final appropriations bill restored funds for all but one of the Buildings and Community Services Systems Programs (a modest effort to overcome problems of small businesses was zero-funded) and for all of the Industrial Energy Conservation programs. Congress also increased the budget of the Vehicle Propulsion RD&D program in the Transportation effort.

The Reagan FY82 budget requests for the DOE Multi-Sector programs--a collection of efforts that do not fit within the other program classification in the energy conservation activity area--set a slightly different pattern, and Congressional response was similarly mixed. Congress provided about $3 million of the former $12 million budget for the program in appropriate technology, against a Reagan request of zero funds. However, Congress responded to a Reagan request for a 50-percent increase for the Energy Conservation and Utilization Program by denying any increase and provided a further slight reduction to Reagan's initial request for a small reduction for the program in Energy-Related Inventions.

The end result was that the FY82 budget maintained the former programs in energy conservation R&D essentially intact, but at budget levels about 50 percent lower in aggregate than in FY81. Whereas, the FY81 budget for the energy conservation R&D programs at DOE had been $350 million, Congress provided $152 million in FY82 in response to a Reagan request of $78 million. This would seem to confirm that there is a congressional consensus that energy conservation requires Federal action to maintain a steady advance and that unregulated energy prices alone will not be sufficient to produce the desired pace of increased energy savings.

The sequence of events for the FY1983 energy conservation R&D budgets were much the same as for FY1982, except that the Reagan Administration sought to zero-fund all but one of the program budgets (20 to 21 programs). Some funds had been sought for eight of the programs in FY1982. Congress again disagreed with the President's request, and maintained the energy conservation R&D programs essentially as in FY1982 in form and funding. The aggregate appropriation for the energy conservation R&D programs in FY1983 was $134 million, in response to an Administration of $17.5 million.

LEGISLATIVE INITIATIVES

The 97th Congress took no major initiatives with respect to energy conservation research and development. Instead, the efforts of the 97th Congress were aimed primarily at preserving the central elements of the conservation R&D program that had been established during the previous three Congresses; most of which activities the Reagan Administration opposed as being inappropriate for Federal investment.

Building Performance Standards*

BACKGROUND

When the 99th Congress passed the Energy Conservation and Production Act (P.L. 94-385), it mandated by 1982 the development of construction performance standards for new residential and commercial buildings. Later, the 1980 Housing and Community Development Act (P.L. 96-399) would change this timetable by requiring interim standards in August 1981 and final standards by April 1983. The legislation's intent was to make compliance to these standards mandatory, thus assuring energy efficiency.

In 1977, the Departments of Energy (DOE) and Housing and Urban Development (HUD) began what would prove to be a long and controversial process to develop these standards. The controversy focused on three issues. First, which would be the lead Federal Agency in developing the standard? The DOE was first given control of the program based on the belief it was part of the Nation's energy plan. After a short time, the program was switched to HUD because it was felt HUD had more expertise in building construction. This switching continued until DOE received final control of the program. Each time a switch took place, development would be delayed and priorities would change.

Second, many in Congress found it difficult to accept the idea that one standard would be applicable for the entire country with all its significant climatic differences. Many argued for example, that what was applicable to buildings in Maine would be irrelevant for buildings in Florida.

Third, the concept of "performance standards" itself came under attack. This concept did not "prescribe" the specific materials or design of a building, but instead mandated a level of energy use per unit of space for a number of different building types. The argument was that the categories of building types were not necessarily representative and that formulating a standard for a volume of space, much less monitoring such a standard, would be next to impossible.

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*By Gary J. Pagliano, Environment and Natural Policy Division.

In December 1980, the General Accounting Office issued a report 1/ recommending voluntary standards for two basic reasons. First, since energy prices had risen significantly it became clear that homeowners and building operators were anxious to conserve energy anyway. Second, DOE reduced its estimate of energy savings from these standards to one-half quad. Even this estimate was challenged by builders who argued that the estimate was based on obsolete construction practices and did not give adequate credit to new energy-saving practices.

The Reagan Administration, in early 1981, deferred funds for the standards program and requested that the 97th Congress repeal the program and rescind the FY 1981 appropriation.

LEGISLATION ENACTED

In lieu of the Reagan Administration request, the Congress amended the standards program in the Ominibus Reconciliation Act of 1981 (97 Stat. 35). The legislation did the following: (1) it extended the deadline for the Federal sector to adopt mandatory standards by three years; (2) it eliminated the potential sanctions of the siginal legislation; and (3) it made standards voluntary for the non-Federal sector.

DOE has restructured its standards program in response to the new legislation. In the residential sector, DOE is conducting applied research, the results of which will be used as guidelines for home builders, material retailers and manufacturers. In the commercial sector, DOE will a suggest updated guidelines to the commercial buildings portion of ASHRAE standard 90A-1980, a voluntary standard developed by the private sector. For the Federal sector, DOE will continue to develop mandatory standards.

Once the standards and guidelines are published, DOE will commence demonstrations to measure their energy savings potential. The demonstrations will occur in at least two geographical areas of the country; and the results will be reported to the Congress.

1/ General Accounting Office. Improved Data and Procedures Needed for Development and Implementation of Building Performance Standards, ENR-81-2

PROSPECTS AND PENDING ISSUES

The 98th Congress has oversight responsibilities for this program and its proposed schedule for completion. This includes DOE reporting the results of the demonstrations and then proposing and promulgating final standards, which must be met by Federal construction agencies. DOE is also obligated to publish "final" guidelines for the non-Federal sectors. Both publications should occur in FY 1985.

Appliance Standards*

BACKGROUND

The Energy Policy and Conservation Act (P.L. 94-163) of 1975 later amended by the National Energy conservation Policy Act (P.L. 95-619), required the establishment of energy efficiency standards for each of 13 classes of energy-consuming appliances. The Department of Energy was to ensure that reseach was performed to establish the technical methods to be used in establishing such standards and performing the necessary measurements to test the energy consumption of appliances in a comparable and equitable fashion. DOE was also to conduct research to determine the economic costs and benefits of developing and applying such standards to appliances manufactured in the United States. According to the legislation, DOE determined that 1) a workable system of standards could not be developed for a particular class or appliances, or 2) the costs of applying such standards were not exceeded by the benefits for any class of appliances, then the standard need not be developed or applied to that class. The two aforementioned acts required that the Secretary of Energy provide standards yielding the "maximum improvement in energy efficiency which the Secretary determines is technologically feasible and economically justified." In addition, the States were required under that legislation to abide by the DOE findings in order to avoid a "patchwork" set of standards across the Nation.

In 1980, the Department of Energy proposed standards for 8 of the 13 classes of appliances, and made it known that the remaining 5 standards would soon announced. Reaction from the manufacturers of appliances and from others was negative on a number of important points relating to DOE's standards and its evaluation of economic impacts. Very shortly before the inauguration of President Reagan, DOE rescinded its proposed standards and announced that it would reanalyze the entire set of standards and economic impacts.

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*by Langdon Crane, Science Policy Research Division.

This new analysis was announced in the Federal Register on April 2, 1982 and drew mixed reaction in the House, where hearings were held by the Energy and Commerce Subcommittee on Energy Conservation and Power. It found that no standards were warranted for any of the 13 classes of appliances on the basis that the amounts of energy to be saved did not justify the burden and expense to manufacturers. It was felt that they would prompted to produce appliances with improved energy efficiencies because of consumer demands even without standards. Standards, according to this new analysis by DOE, would only result in marginal improvements in energy efficiency above the improvements produced by consumer demand. A GAO review of this analysis contested DOE's basic assumption that higher energy prices would produce a market demand for more efficient appliances in the magnitude predicted.

LEGISLATIVE INITIATIVES

The major focus of concern in the House--the Senate did not formally consider the matter--was that a DOE finding that no standards were justified would, according to the above legislation, pre-empt the individual States from imposing standards which they felt were necessary and valuable. Several States voiced concern that without the standards that they had individually adopted, the demand for electricity could rise sufficiently to require construction of otherwise unnecessary electrical power plants. Legislation was therefore proposed (H.R. 6202) to remove the State pre-emption from the existing legislation so that DOE's findings would not affect those States wishing to promulgate standards. This proposal would have left in effect other provisions of the legislation, such as that requiring the labeling of appliances with regard to their energy efficiency.

An alternative proposal (H.R. 5497), which also preserved the labeling requirement, proposed that the entire standards question be mandated to the individual States and be stricken from existing legislation. This measure would have terminated further discussion of the DOE findings and given individual States responsibility for the energy efficiency of appliances used in their areas. Neither proposal came to a vote.

Cogeneration*

BACKGROUND

A cogeneration system produces both power and useful heat from a single fuel source. By reducing the amount of otherwise wasted heat, cogeneration can significantly improve the efficiency of fuel use. Cogeneration technology has a history of proven energy savings in Europe and the United States which dates back to the turn of the century. However, the advent of centralized utility powerplants--operating on cheap oil and natural gas-caused its use in the United States to decline steadily from the 1930s to the 1970s. During the mid 1970s, Federal interest developed in the potential for cogeneration to reduce national dependence on oil imports and the demand for utility powerplant construction.1/ Since it is a readily available technology with a large energy saving potential, cogeneration has acquired a leading role in the U.S. industrial conservation effort.

Funding

A Federal Cogeneration Program was first established in 1975 at the Energy Research and Development Administration (ERDA). When ERDA became the Department of Energy, efforts continued under the Offices of Conservation, Nuclear and Fossil Energy. Beginning with a budget of $1.4 million in 1975, the Program received nearly $420 million in appropriations through FY82.2/

Table 1. Federal Appropriations for Cogeneration

FY75	FY76	FY77	FY78	FY79	FY80	FY81	FY82
$1.4	12.4	37.2	70.4	88.0	75.1	74.8	59.8

The general trend toward increasing support for cogeneration under the Carter Administration has been sharply reversed under the Reagan Administration. As part of its strategy for reducing the Federal deficit, the current Administration initiated budget cutbacks during FY81 and FY82 which have affected all cogeneration subprograms, and brought some to an end.

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*By Fred Sissine, Science Policy Research Division.

1/ .U.S. General Accounting Office. Energy and Minerals Division. Cogeneration: What It Is, How It Works. Its Potential. (EMD-80-7) April 29, 1980. 82 p.

2/ These figures are dominated by a total of $187 million spent by the fuel cell R&D program.

For FY83, the Administration's budget request would force termination of all remaining efforts except fuel cells, for which a modest $9.5 million was sought.3/ However, the Congress rejected this move. The recommendations of the Interior and Related Agencies Appropriation (P.L. 97-394) stayed close to the Omnibus Budget Reconciliation Act (P.L. 97-35) levels, amounting to a total of nearly $45 million for cogeneration activities in fossil energy ($30.5 million for fuel cells) and energy conservation programs.4/

Program Strategy

During the Carter Administration, the Federal Cogeneration Program involved R&D and implementation efforts. The R&D strategy focused on direct budget support to increase power-to-heat ratios and to develop advanced coal, nuclear, solar and municipal waste energy cogeneration and cogenerated-district heating concepts. Meanwhile, the implementation strategy was based primarily on the avoided cost and interconnection provisions established by the Public Utility Regulatory Policies Act (PURPA, P.L. 95-617). The interconnection provision requires utilities to let cogenerators hookup with the grid to buy and sell power. The avoided-cost provision requires that utilities buy power from cogenerators at a marginal price which reflects fuel purchase and capacity construction costs that the utilities avoid by using this power. An additional implementation incentive, a ten-percent tax credit for systems that use alternate fuels, was created by the Windfall Profits Tax Act (WPFA, P.L. 96-223).

The basic character of this program, however, may be changing under the Reagan Administration. The Administration believes that rising energy costs have been the primary motivation for the implementation of cogeneration and other energy conservation activities. It argues that the R&D tax credits provided by the Economic Recovery Tax Act (ERTA,

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3/ U.S. DOE. Congressional Budget Request, FY1983, v. 5 (Fossil Energy). [DOE/MA-0057]

4/ U.S. Congress. Committee of Conference. Making Appropriations for the Department of the Interior and Related Agencies for the Fiscal Year Ending September 30, 1983. H. Rpt. 97-978. 97th Cong., 2d Sess., Dec. 17, 1982. p. 3435; also see U.S. Congress. House. Committee on Appropriations. Subcommittee on the Interior. Department of the Interior and Related Agencies Appropriations Bill. Report to Accompany H.R. 7536. H. Rpt. 97-942, 97th Cong., 2d Sess., Dec. 2, 1982. Washington, U.S. Govt. Print. Off., 1982, p. 95, 96, and 101.

P.L. 97-34) provide sufficient incentive for cogeneration research in the private sector. Additionally, it claims that fuel price decontrols together with accelerated depreciation provisions created by ERTA, and modified by the Tax Equity and Fiscal Responsibility Act (TEFRA, P.L. 97-248), provide ample incentives for the private sector to implement cogeneration systems.

LEGISLATIVE INITIATIVES

When the 97th Congress began, the Cogeneration R&D Program was in the process of expanding. The Federal Regulatory Commission (FERC) had just promulgated rules to implement the PURPA incentives, and corporate management was beginning to factor in the WFPA tax credit. However, conflicts over PURPA's specifications for ownership and incentives for implementation provided the stimulus for most of the legislative activity in the 97th Congress.

Several bills were introduced which would increase the tax credit for cogeneration to 20 percent (H.R. 2640, H.R. 2946, H.R. 6572, S. 750, S. 787, and S. 1288). Other legislation sought to reduce utility onwership restrictions (H.R. 2876, H.R. 2992, S. 1885, S. 1869). One of these (H.R. 2992) also attempted to exempt cogeneration facilities from certain provisions of the Fuel Use Act. Additionally, one bill (H.R. 6500)--and a proposed amendment to another bill (S. 1885)--aimed at clarifying PURPA avoided cost and interconnection provisions which had been vacated by a Federal appeals court decision.[5]

PROSPECTS AND PENDING ISSUES

Important policy questions involve implementation and the potential for deriving energy savings and economic benefits from current and advanced technology. The most significant questions have emerged from delays and uncertainties involving PURPA incentives. Most State Public Utility Commissions did not meet FERC's March 20, 1981 deadline for PURPA implementation, and they still have not taken action. State implementation has been overshadowed by Congressional initiatives to change PURPA's limitations on utility ownership and by Federal court challenges to PURPA's constitutionality and provisions for interconnection and avoided cost. Fluctuating fuel prices have also contributed to implementation uncertainty. Rapidly escalating oil prices were followed by tax-policy initiatives in the 97th Congress, and recent decreases have undercut the avoided cost in some States. Additionally, budget cuts in R&D will likely delay the availability of advanced cogeneration technologies and could hurt our competitiveness in international markets for this equipment. Thus, the Federal position on regulatory, tax-credit, and budget issues may significantly influence the attainment of potential benefits from cogeneration.

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[5] American Electric Power Service Corp. (AEP) v. FERC, Docket No. 80-1789.

Regulatory Issue: Avoided Cost and Interconnection.

Action on cogeneration during the 97th Congress was overshadowed by Federal court and Supreme Court decisions affecting the cogeneration provisions of PURPA. According to the Federal Energy Regulatory Commission (FERC), the avoided-cost and interconnection provisions have been very significant incentives for the implementation of cogeneration. However, a Federal District Court in Mississippi found PURPA unconstitutional in early 1981. This decision was overturned by the Supreme Court in its review of the case on June 1, 1982.[6] A second challenge, initiated by a group of utilities, led to a January 1982 D.C. Court of Appeals decision to vacate the avoided cost and interconnection provisions.[7] Upon appeal from FERC, the Supreme Court decided on Oct. 12, 1982 to review this case.[8] Although the lower court's decision will not be binding, FERC reports that it may effectively limit cogeneration implementation to the 14 States that have already taken action on PURPA.

Avoided Cost. If FERC loses the avoided cost issue, the Court is likely to establish a "most proper standard," and remand the issue back to the appeals court. The eventual outcome of this process would be a new FERC rulemaking to justify some level of purchase price. However, such rules would probably be vulnerable to judicial action again. Thus, congressional action may be needed to clarify such a pricing provision. Legislation to lower the power purchase rate to a major fraction of the avoided cost may be forthcoming in the 98th Congress.

Interconnection. FERC suggests that if it loses the interconnection issue, it would likely face a growing backlog of paperwork on evidentiary hearings. If this bottleneck becomes serious enough, congressional action to clarify the provision may be necessary. Others suggest that, regardless of the Court's ruling, there will remain a need to clarify the interconnection provision. Otherwise, it would still remain open to further judicial action.

Regulatory Issue: Implementation Enforcement. This question involves the extent of FERC's power to require PURPA implementation. The following example illustrates the problem. If a State has an implementation plan in effect and a utility fails to abide by the State regulations in accommodating a potential cogenerator, can the cogenerator go over the State Public Utility Commission and appeal directly to FERC?

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[6] FERC v. Mississippi, Docket No. 80-1749.

[7] AEP v. FERC, Docket No. 80-1789.

[8] FERC v. AEP, Docket No. 82-226.

Regulatory Issue: Utility Ownership. PURPA limits utilities to 50 percent ownership of any cogeneration facility which attempts to qualify for the avoided-cost incentive. Utilities argue that this provision reduces the economic attractiveness of cogeneration and discriminates against them by allowing special pricing benefits for nonutility owners. They indicate that removal of this limitation would enhance their involvement with cogeneration. Opponents argue that the limitation is an important tool in small company negotiations for utility power purchase contracts. They contend that its removal would violate PURPA's intent to deregulate power production and facilitate anticompetitive effects through utilities' creation of unregulated subsidiaries. This issue emerged during the first session of the 97th Congress, and may underlie the Federal court activities that took place during the second session. It may also trigger further legislative activity in the 98th Congress.[9]

Tax Credit Issue. The Administration has made clear its opposition to targeted tax credits for conservation technologies such as cogeneration. Consequently, none of the bills introduced during the 97th Congress to increase the ten-percent cogeneration investment credit would have rescinded its limits on oil and natural gas use or would have extended its period of application reached the floor for action.[10] Some argue that the credit (which expired on Dec. 31, 1982) was not big enough or broad enough to have a significant impact on cogeneration implementation. They say that ERTA accelerated depreciation--especially as strengthened by TEFRA--is having a greater impact than the credit.

Others observe that the effect of the credit was impeded by a short period of application, IRS failure to implement regulations, and the TEFRA basis adjustment provision which reduced its effective value to seven percent. They suggest that accelerated depreciation is a more effective incentive than the credit when the equipment purchaser is also the user, but is more effective for a third party (purchaser and operator, but not user) arrangement. Additionally, the majority of cogeneration potential involves the use of gas turbines, and it is pointed out that most planning for gas-facility implementation involves a third-party strategy. Thus, it is argued that this area of cogeneration development could be significantly dampened by the lack of a tax credit.

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[9] See U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy Conservation and Power. The Utility Role in Cogeneration and Small Power Production (H.R. 2876 and H.R. 2992). Hearings, 97th Cong., 1st Sess., April 27 and June 3, 1981. Washington, U.S. Govt. Print. Off., 1981; also see U.S. Congress. Senate. Committee on Energy and Natural Resources. Subcommittee on Energy Regulation. Public Utility Regulatory Policies Act Amendments (Parts I and II). Hearings, 97th Cong., 2d Sess., April 19 and May 24, 1982. Washington, U.S. Govt. Print. Off., 1982.

[10] Proposals are contained in H.R. 2640 (Heftel), H.R. 2946 (Alexander), H.R. 6527 (Heftel), S. 750 (Wallop), S. 787 (Kennedy), S. 1288 (Durenberger), and S. 2549 (Packwood).

Furthermore, it is argued that the recently decreasing value of the avoided cost for cogeneration power purchases has increased the significance of a tax credit. For instance, during 1982, falling oil prices forced California's avoided cost to drop more than 30 percent. As a result, the State Public Utility Commission switched to natural gas prices as the avoided cost standard. Some suggest that this drop, along with uncertainty over the standard, has increased the importance of the tax credit incentive.

Legislation to reinstate a ten percent tax credit, probably one with fewer restrictions on oil and gas use, is likely in the 98th Congress.

Budget Issue. The Federal Cogeneration R&D program has been focused on increasing the ratio of power to heat output and accelerating the demonstration of systems which can use alternative fuels. Congress has allowed Administration initiatives to markedly reduce RD&D activities during FY81 through FY83. The Administration believes that fuel price decontrols and expectations of increasing energy costs will accelerate market-driven RD&D of advanced technologies. It also expects that ERTA R&D tax credits will provide sufficient incentive for private research activity.

Many supporters of the Cogeneration Program agree that increasing energy prices may prompt industry to reduce fuel costs, but do not necessarily lead to increased RD&D and implementation. They point out that price hikes may also aggravate the recession-induced cash flow problems experienced in many of the industries where cogeneration is most appropriate. This means that fuel costs may be reduced by cutbacks in plant utilization, instead of investment in more energy efficient equipment. The effects of energy price changes create even more uncertainties for private sector RD&D than for implementation. In many cases, the uncertainties about energy prices only add to a company's reluctance to demonstrate a new energy technology which may jeopardize the production process, or to invest in non-production related R&D. Additionally, many companies--especially the smaller ones--lack the necessary technical information and expertise which the Program provides.

Proponents also argue that the Cogeneration Program has the ability to help national economic recovery by reducing oil import vulnerability, increasing the cost competitiveness of domestic industry, and improving the balance of trade. On the second point, supporters observe that presently available systems employ older technologies. Since cogeneration systems last up to 30 years, companies that install the older systems now may lock themselves into a less competitive position for decades. On the last point, they note that cogeneration components such as gas turbines and waste heat recovery boilers presently account for annual sales of $2 to $3 billion, primarily in foreign markets. It is emphasized that these sales are likely to decrease due to increasing foreign competition.

Furthermore, it is argued that this competition increases the importance of the two major R&D projects still underway at DOE: the slow-speed diesel engine fueled by a coal/water mixture and the atmospheric-fluidized bed (AFB) system which would convert coal for use in gas turbines. DOE estimates that both systems will reach commercialization in six to seven years and will have a large market potential. Nevertheless, commercialization of the AFB will require a $50 to $70 million demonstration project. DOE arranged cost-sharing for such a demonstration in 1979, but cutbacks in the Cogeneration Program budget have caused its dissolution.11/

11/ Personal communication with Mr. John Eustis, DOE Industrial Cogeneration Program, Jan. 11, 1983.

District Heating*

BACKGROUND

A district heating or cooling system transports thermal energy from a central source into a piping network that distributes the energy to connecting equipment in buildings. It can use alternative fuels and waste heat to provide process heat for industry and space heating for residential and commercial sectors. The technology for district heating with steam was first developed in the United States during the 1880s. Its use grew in tandem with cogeneration developments, but declined with the advent of centralized utility powerplants during the 1930s and 1940s. This decline continues today. Most of the 50 or so steam systems in this country employ aging equipment, earn low rates of return, and are losing customers.

High post-World War II oil and natural gas prices triggered European interest in the fuel-saving and fuel-switching potential of district heating. However, the Europeans chose to develop and implement hot-water systems because they have a much greater range of cost-effective transport than steam systems. During the mid 1970's, rising fuel prices and increasing vulnerability to oil import disruptions created Federal interest in the potential for hot-water technology.

A Federal program was first established in 1976 in the Energy Research and Development Administration (ERDA). When ERDA became the Department of Energy (DOE) in 1977, efforts continued in the Office of Conservation and Renewable Energy, and Nuclear Energy. In FY81, a district heating assessment program was initiated in the Office of Community Planning at the Department of Housing and Community Development (HUD). Although the Federal Program has involved research on the use of nuclear and geothermal heat sources, its major focus has been on the transfer and implementation of European-style hot water technology with coal and municipal refuse as the primary fuels.

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*By Fred Sissine, Science Policy Research Division.

Funding. Beginning with a budget of \$2.1 million in 1976, the Federal district-heating effort received over \$64 million in steadily increasing appropriations through FY81.[1]

Table 1. Federal Appropriations for District Heating

FY76	FY77	FY78	FY79	FY80	FY81	FY82
\$2.1	5.6	8.4	11.1	14.5	22.4	5.3

The general trend toward increasing support for district heating under the Carter Administration has been sharply reversed under the Reagan Administration. As part of its strategy for reducing the Federal deficit, the Administration made cutbacks in the DOE FY82 budget which significantly reduced funding for all district heating subprograms. A total of \$5.3 million was spent in FY82. Although district heating does not appear as a line item, a survey of DOE program managers indicates that the cutbacks proposed for Conservation and Renewable Energy Programs in FY83 by the Administration have resulted in zero budgets for all district heating subprograms, effectively terminating DOE activity in this area.[2]

Program Strategy. Just before the 97th Congress began, the Federal effort was in the process of expanding. Under the leadership of John Sawhill, then Deputy Secretary of DOE, an interagency proposal for a "National District Heating Plan" to accelerate the use of hot water technology was being developed for White House consideration. DOE and Oak Ridge National Laboratory (ORNL) were concluding concept studies and prototype applications of European-style systems. They arranged for European personnel to consult with State and local governments on technical, economic and institutional aspects of implementation. Meanwhile, Congress authorized the Department of Housing and Urban Development (HUD) to use \$1.5 million of FY81 money for assessment studies of hot water system implementation in 28 communities eligible for Community Development Block Grants (CDBG).[3]

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[1] These figures are dominated by a total of \$40 million spent in the subprogram budget. Most of the spending in the geothermal area has been for exploration and feasibility studies, not for system construction.

[2] Personal communication with Mr. John Millhone, DOE Buildings and Community Systems Program and Mr. Eric Peterson, DOE Geothermal Program, Dec. 13, 1982.

[3] This authorization was made with an understanding between HUD and DOE that HUD would designate the communities to receive funding, and DOE would arrange for technical assistance from Argonne and Oak Ridge National Laboratories. The authorization is contained in the Housing and Community Development Act of 1980, P.L. 96-399.

The first U.S. commercial hot water system was installed in Willmar, Minnesota in Fall 1982. It has a capacity of four Megawatts-thermal (MWt). The development of a large-scale hot water system in St. Paul, Minnesota, will be another first. Formerly one of DOE's most publicized prototype efforts, its implementation is now in the hands of the St. Paul District Heating Co. (SPDH), a non-profit corporation, which expects to begin construction in March 1983. The total cost for the 125 Megawatts-thermal (MWt) project is estimated at $65 million. Financing will be derived from SPDH revenue bonds, backed by 30-year contracts with the owners of hospitals and major commercial building.4/

The FY81 HUD appropriation, which was spent mostly during FY82, has created some interest in district heating in several cities. HUD emphasizes that implementation resulting from any of the 28 assessment efforts underway may contribute to urban and municipal revitalization by creating employment, investment in local infrastructure, and stabilized energy costs for commercial and residential sectors. Argonne National Laboratory (ANL) presented preliminary findings from 21 of the 28 HUD/DOE assessment efforts in November 1982.5/ ANL found that four projects, with a total cost estimated at $105 million, are ready to begin construction. Altogether, 24 project feasibility studies from 21 cities have been reviewed. It is estimated that their total cost of implementation would be near $1.2 billion, and the primary funding sources would include HUD Urban Development Action Grants (UDAG), private capital, and municipal bonds.

ANL reports that these 24 projects could achieve energy savings equivalent to 33.6 million barrels of oil per year, and produce 2100 MWt and 500 Megawatts-electric. Coal and urban refuse were identified as the major fuel sources, and cogeneration would be the dominant technology used for heat production. Apparently, the use of cogeneration for heat production may contribute to the attractiveness of these projects. During summer months of low heat demand, the owner can increase the amount of cogenerated power to help cover system costs with electricity sales. ANL estimates that cognerated power could provide almost one-third of the $286 million in combined annual revenue that these 24 projects would have to generate in order to break-even.

4/ Personal communication with Dr. Michael Karnitz, ORNL, Jan. 26, 1983.

5/ U.S. Argonne National Laboratory. HUD/DOE District Heating and Cooling Assessment Program: Preliminary Findings. November 1982.

Although HUD no longer receives any direct appropriation for district heating, the agency is still interested and continues to fund projects through CDBG and UDAG monies. It has approved three cooperative district heating agreements with cities, worth $0.6 million for FY83.6/

LEGISLATIVE INITIATIVES

The only district heating legislation enacted during the 97th Congress is a provision of the Tax Equity and Fiscal Responsibility Act (TEFRA, P.L. 97-248), which makes system construction eligible for industrial development bonds.7/ Other legislation was introduced but did not reach the floor. Two bills (H.R. 848, AuCoin; and H.R. 3205, Oberstar) would have authorized HUD to make grants and loans to local governments for feasibility studies and implementation. Another bill (H.R. 5833, Oberstar) proposed an amendment to the Energy Security Act (P.L. 96-294) to require that one-fourth of the total annual obligation for the Synthetic Fuels Corporation be made available for district heating and municipal waste recovery projects. Hearings were held on this bill, but it did not reach the floor for action.8/

Two other bills (H.R. 3204, Oberstar; S. 2025, Durenberger) proposed that the investment and residential-energy tax credits be made available for district-heating equipment. Senator Durenberger's bill also proposed to clarify

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6/ Personal communication with Mr. Wyndham Clark, HUD Office of Community Planning, Dec. 13, 1982.

7/ This provision was introduced as an amendment by Senator Durenberger on July 21, 1982, and TEFRA became public law on Sept. 3, 1982. The provision can be found in U.S. Congress. Senate. Conference Committees, 1982. Tax Equity and Fiscal Responsibility Act of 1982. Conference Report to Accompany H.R. 4961. Senate Report No. 97-530, 97th Cong., 2nd Sess. Washington, U.S. Govt. Print. Off., 1982. p. 160-161.

8/ U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Fossil and Synthetic Fuels. Synthetic Fuels Corporation and Oil Inventories Policy. Hearings. 97th Cong., 2nd Sess., April 2, 1982. Washington, U.S. Govt. Print. Off. 1982 (Hereafter "House Energy and Commerce Hearing").

the application of the Economic Recovery Tax Act's (ERTA, P.L. 97-34) accelerated depreciation provision to district heating. A number of issues, including some addressed by these two bills were considered in hearings held by the House Science and Technology Committee in 1981.9/

PROSPECTS AND PENDING ISSUES

The most important policy questions involve the pace and direction of district heating implementation. The major concern involves the Federal role. European governments continue to encourage implementation with sizeable grants, loans, and hookup incentives. This support for market development has helped European district heating equipment companies, which are now competing with U.S. firms for contracts to install systems in areas of the Frost Belt. Since the current Federal mood emphasizes budget control and reduction of the deficit, there has been increased congressional interest in using the Synthetic Fuels Corporation (SFC) fund and a variety of tax policy changes to provide support for implementation comparable to European efforts. Thus, district heating policy actions in the 98th Congress are likely to involve issues related to the Federal role, SFC funding, tax policy, and international competition.

Federal Role. The DOE Office of Conservation and Renewable Energy has provided the leadership for most of the Federal district heating effort. However, testimony from hearings held by the House Science and Technology Committee indicates that, under the Reagan Administration, this Office has taken the position that district heating technology is well known, and therefore there is no need for a Federal role in demonstration and commercialization activities.10/ Furthermore, it is argued that general economic conditions will dictate implementation, and the Government should not attempt to modify these conditions through Federal expenditures. From DOE's present viewpoint, responsibility for district heating implementation should be left in the hands of local government.

In contrast, some of the witnesses support a continued Federal role in district heating. They emphasize the potential to reduce national energy consumption and oil imports, and the ability to encourage urban revitalization. They argue that most local governments cannot afford feasibility studies, to

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9/ U.S. Congress. House. Committee on Science and Technology. Subcommittee on Energy Development and Applications. District Heating and Cooling. Hearing, 97th Cong., 1st Sess., July 23, 1981. Washington, U.S. Govt. Print. Off. 1982. (Hereafter "House Science and Technology Hearing).

10/ House Science and Technology Hearing, July 1981.

say nothing of the initial capital cost or debt service needed for construction. Furthermore, the private sector is hesitant to put up the necessary capital because of risks derived from uncertainties about long-term consumer connections. Thus, it is suggested that there is a need to create examples of operational and financial success with hot-water systems so that they can attract market support for implementation. They conclude that such examples can be achieved through Federal grants and loans to assist local governments with feasibility studies, incentives to encourage private sector assessments, and tax incentives for system equipment and consumer connections.

Synthetic Fuels Corporation Funding. Cutbacks in DOE funding have prompted legislation to broaden the lending authority of the Synthetic Fuels Corporation (SFC) to include district heating and cooling projects.11/ Proponents point out that high interest rates, lack of investor familiarity, and cities' general lack of up-front capital are major barriers to the construction of district heating and cooling systems. They argue that waning support for the SFC in Congress can be bolstered by making a more balanced range of technological options eligible for support and by insuring a more equitable regional distribution of its investment capital. SFC financing can provide leveraging ability to initiate complex projects from disparate financing sources.

However, rising anti-SFC sentiment in Congress threatens its continued existence. Opponents argue that the SFC is fraught with administrative problems, such as difficulties getting private sector investment participation and launching its first project. The Administration's budget cutting efforts place additional pressure on the SFC. Even if the SFC survives, support for district heating and cooling funding may be opposed by those who believe that it would only open the door for an unmanageable number of other energy interests seeking alternative sources of financing.12/

Tax Policy. In 1981, the Internal Revenue Service (IRS) passed a ruling which extended the application of the investment tax credit to include steam-distribution equipment for district heating systems.13/ However, IRS may construe the implementation of this rule narrowly, excluding hot-water piping equipment from eligibility. Some feel that such a discrimination would be unfair, and argue that this rule needs to be amended to ensure its application of ERTA's accelerated

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11/ This proposal is contained in H.R. 5833, introduced by Rep. Oberstar and Rep. Schneider on March 15, 1982. See Legislation section.

12/ House Energy and Commerce Hearing, April 1982.

13/ IRS. Internal Revenue Bulletin, no. 1981-33, Aug. 17, 1981. (Rev. Rule 81-199). p. 5.

depreciation provision to district heating equipment is vague, and should be amended to make clear its eligiblity for the most favorable category of depreciation. Additionally, it has been argued that consumer expenditures for equipment to connect with a district heating or cooling system should be eligible for the 40-percent residential energy tax credit.14/ All three of these concerns are likely to prompt legislative action during the 98th Congress.

International Competition Issue. Heated competition is underway in Minnesota over contracts to supply piping and interconnection equipment. Ecopipe, a Swedish firm, has been chosen by the St. Paul District Heating Co. to supply this equipment for the largest U.S. project planned for construction. It is reported that Danish and Finnish companies also have a keen interest in the U.S. market which seems to be opening up.15/ Some observers point out that European companies have a strong motivation to export because of decreasing markets at home. They also have the capital, available hot-water technology, and the contacts necessary to move quickly into the U.S. market. In contrast, U.S. piping companies are smaller, and have been focused primarily on the production and sale of steam equipment. They appear to be quite concerned about the foreign competition.16/ However, some believe that the large companies engaged in the manufacturing of pipe for natural gas and oil industries can easily gain control of the hot-water piping market, if they believe that it is large enough.

14/ All three of these recommendations for district heating tax policy were addressed in S. 2025, introduced by Senator Durenberger. See Legislation section.

15/ Personal communication with Dr. Michael Karnitz, ORNL, Jan. 26, 1983.

16/ Personal communication with Mr. Richard Eckfield, North American District Heating and Cooling Institute, Dec. 2, 1982.

CHAPTER VII. ENERGY AND THE ENVIRONMENT

Energy and the Clean Air Act*

BACKGROUND

The relationship between air quality and energy has been at issue whenever Congress has debated either topic. A number of energy-related aspects were debated in the 97th Congress in the context of reauthorizing the Clean Air Act Amendments of 1977, but by the end of the Congress no consensus was reached on ways to amend the Act further.

The Clean Air Act

The Clean Air Act of 1970 (as amended in 1977) requires the Envirionmental Protection Agency (EPA) to establish limits on the amount and concentrations of major air pollutants--national ambient air quality standards (NAAQS)--and sets deadlines for meeting them. EPA now controls sulfur oxides (SOx), total suspended particulates (TSP), nitrogen oxides (NOx), carbon monoxide (CO) hydrocarbons (HC), ozone and lead (Pb).

The law divides the nation into 247 air quality control regions with common air pollution characteristics (AQCRs) which are designated as being in attainment of standards, nonattainment, or cleaner-than-standard for each controlled pollutant. State governments must draft implementation plans (SIPs) to implement and enforce the statutory requirements.

To attain NAAQS, new major fuel-burning facilities must comply with total emissions limits. These are technology-based nationwide emission control standards set by EPA. They include:

a) New Source Performance Standards (NSPS) to be attained by continuous technological controls which have been "adequately demonstrated," taking costs and other production-related elements into account. EPA

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has issued NSPS for over 34 industrial categories. NSPS may not be attained solely by switching to low-polluting fuels, nor by dispersing emissions from very high stacks or by intermittent control mechanisms that are triggered by varying meteorological conditions.

b) Best Available Control Technology (BACT), to be determined by the States on a case-by-case basis. This control technology must be used in cleaner-than-standard areas and by new sources for which no NSPS has been set.

c) Lowest Achievable Emissions Rate (LAER) determined by the States and imposed on new sources in areas which have failed to attain standards. BACT and LAER may be more stringent than NSPS, but not less so.

In addition, new fossil-fuel-burning sources must achieve a 70-90 percent reduction in SOx emissions regardless of the limits imposed by applicable NSPS and regardless of the sulfur content of the coal they use. A facility burning low-sulfur coal must reduce its SOx emissions to the same level as one using high-sulfur coal, although its absolute reduction would be less.

Attainment areas must maintain the standards they have achieved. Areas which fail to attain standards (nonattainment areas) must meet stricter controls regardless of cost. These control mechanisms, in addition to LAER, include retrofitting existing facilities with "reasonably available" abatement technology (RACT); withholding a building permit unless the new plant's projected residual emissions are more than offset by reductions from existing facilities; and, if nonattainment is due to transportation-related pollutants, establishing programs to ensure that emission controls on vehicles operated in nonattainment areas do not deteriorate through malfunction or neglect.

Cleaner-than-standard areas are subject to prevention-of-significant-deterioration (PSD) rules. Central to these rules is their "increment" system which budgets the annual amount of permissible additional pollution in three classes of areas, from virtually pristine to industrially developed. New plants seeking to locate in PSD areas must install BACT as defined by the States on a case-by-case basis. Only SOx and

TSP are regulated for these areas under current law, although other controlled pollutants are to be regulated later.

LEGISLATIVE INITIATIVES

In 1977, Congress established a National Commission on Air Quality (NCAQ) to make an independent analysis of air pollution control measures and alternative strategies for achieving the goals of the Clean Air Act. NCAQ submitted its report in March 1981, and its findings and recommendations provided a basis for the congressional debate in 1981 and 1982.

The commission concluded that the Act as it stood would not "significantly affect national patterns of energy production and consumption," although it thought that some provisions could affect energy development in certain areas. It singled out the nonattainment and PSD programs as most likely to affect energy development and utilization strategies directly. During the debate in the 97th Congress, further aspects of the law came in for criticism, including complications arising from differences in NSPS, BACT, LAER, and the percentage reduction requirements for stationary sources, transboundary pollution problems (especially acid precipitation), and the increasingly stringent automobile emissions control provisions.

Neither House questioned the approach of the law, nor the continued validity of the established statutory structure, but identified individual sections of the the law as candidates for amendment. While the House and Senate agreed on the issues which needed reexamination and possible revision, they differed on the degree to which statutory changes were necessary and on the methods and time frames by which such changes were to be accomplished.

The Senate Committee on Environment and Public Works, whose markup vehicle was the existing law, reported S. 3041 on November 15, 1982. The House Committee on Energy and Commerce which was debating a considerably revised version of the law, H.R. 5252, adjourned markup in August, 1982 without reporting a bill. The two bills differed markedly on several major issues. When it became apparent that they could not be resolved, the Act was not reauthorized and the 97th Congress adjourned without taking further action. Congressional deliberations were complicated by the absence of an Administration bill. Instead, the Administration supported "basic principles" which dealt with various aspects of the law, and represented general guidelines on which to base possible amendments.

NSPS, BACT, LAER and the Percentage Reduction Provision

One Administration principle stated that pollution control standards for coal-fired plants should be uniform requirements based on environmental criteria, eliminating the percentage reduction requirement of the 1977 amendments. To some, this proposal reflected a position advocating a single emission limitation for each pollutant, to be applicable nationwide regardless of an area's designation.

Proponents of this change argued that the present statutory requirements were too cumbersome, and stood in the way of continued orderly economic growth. 1/ Defenders of the current system countered that health and welfare protection required stricter controls in "dirty" areas to speed up attainment, and in PSD areas to prevent deterioration of better-than-standard air quality as long as possible. New, improved control technology was likely to be more efficient and less expensive--the very reason for the Act's "technology-forcing" approach.

H.R. 5252 would have limited the application of the percentage reduction requirement to those fossil-fueled stationary sources to which NSPS regulations applied on December 31, 1981. Thus, it would not have applied to industrial boilers. Both Houses would have provided for a ten-year moratorium from subsequent stricter regulations, except in the case of a newly regulated pollutant. The bills in both Houses would have substituted BACT for LAER, thus applying the same emission reduction requirements for PSD and nonattainment areas.

Prevention of Significant Deterioration (PSD) Strategies

The Administration proposed to retain PSD requirements for parks and wilderness areas (Class I) only, and protect all others by uniform technology control requirements. Other advocates of changes in approach to

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1/ U.S. Congress. Senate. Committee on Environment and Public Works. Clean Air Act Oversight. Hearings, April, May, June 1981. Part 1. U.S. GPO. Washington, D.C. 1981, pp. 520, 524.

the PSD concept and its implementing rules said that the complicated procedures and the unreliability of the underlying measurements and projections resulted in burdensome mechanisms which failed to produce the expected results.

Defenders of the current system, while admitting that it should be simplified, insisted that it was essential to continue pressure to improve air quality. They felt that BACT or other industrial emission limitations alone are inadequate to limit the rate of clean air deterioration.

Both the House and Senate bills would have repealed the Class III area classification, simplified the increment tracking process and retained mandatory Class I area requirements. States could have opted to replace the increment system in all but statutorily mandated Class I and II areas with a detailed, EPA-approved States classification plan.

The Nonattainment Provisions

All nonattainment areas were to attain standards by December 31, 1982. Under the 1977 law, extensions to 1987 for carbon monoxide (CO) and ozone were possible under certain circumstances but subject to additional requirements in SIPs. They consisted mainly of additional mobile source-related controls including inspection/maintenance (I/M) programs. If attainment deadlines were not met, no construction permits for new sources could be granted until the areas demonstrated a reduction of existing emissions and continued progress toward attainment. If States applying for a 1987 extension failed to comply with the additional statutory requirements, certain grant funds, including some highway construction funds, had to be withheld. 2/

The Administration held that while steady progress toward cleaner air should continue, statutes, standards and regulations should be reasonable and be related to

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2/ Many counties did not meet the December 31, 1983, NAAQS deadline. EPA therefore has proposed to impose a new-source construction ban on areas which continue in nonattainment past this deadline of standards for pollutants generated by stationary sources. The agency also has proposed to withhold Clean Air grants and certain highway funds from areas which exceed automobile-related emission limitations and are located in States which have failed to submit or implement requisite SIP revisions, or demonstrate other "reasonable efforts to comply."

the economic and physical realities to a given area. Proponents of changes in nonattainment requirements added that LAER, which represents the best technology in use by any facility in the country, was an inappropriate requirement because it ignored regional differences, costs or feasibility, and perpetuated the operation of older inefficient sources, thus seldom achieving lower emissions. Supporters of the existing provisions countered that LAER should be retained to forestall a rapidly diminishing availability of offsets of pollution reduction in areas kept in nonattainment by less effective control technology, thus decreasing economic growth opportunities.

The bills in both Houses would have substituted BACT for LAER, thus applying the same emission reduction requirements for PSD and nonattainment areas. They would have provided for more flexible deadlines under certain circumstances, made some penalties and sanctions discretionary, and encouraged innovative control programs.

New Energy-Related Issues

In addition to tackling proposals to amend existing sections of the law, the 97th Congress also debated broader issues which sometimes transcended single CAA sections. They included:

Regulatory Efficiency. The Act requires States to attain EPA-established pollutant limits either through technology-based emission controls or through limits on pollution increments in clean air areas. It is uncertain, however, whether or not this approach which is based on source-by-source, polluant-by-pollutant control is the most effective one.

Critics say that these tactical procedures are too cumbersome, inflexible and incompatible with other valid national concerns, and do little to advance the goal of clean air. They propose a single standard per pollutant for all major sources, and a simplified permitting procedure at State and local levels only that would incorporate any additional requirements a State may deem necessary to attain and maintain NAAQS.

Advocates of the present system say that it is not as inflexible as portrayed. They maintain controls for existing major industrial installations have been simplified by the "bubble policy" which limits the total amount of emissions from a complex containing several sources rather than emissions from each source separately.

Legislatively, one problem has been that attempts to incorporate economic or technological adjustments into the Act often add to, rather than reduce, the required procedures. The House and Senate bills in the 97th Congress included several provisions to add flexibility to the Act, allow EPA more discretion, and give States more authority while reducing EPA review requirements. Both bills would have made technology requirements in PSD and nonattainment areas identical. They also would have established procedures ensuring quicker handling of SIPs and State-initiated changes.

Interstate Pollution. Provisions to limit transboundary pollution appear in several key sections of the Clean Air Act. States may petition EPA for a finding that a source violates these provisions, and EPA can take action against the source to ensure compliance. EPA can also designate an interstate area as an air quality control region in which NAAQS are attained and maintained jointly by all involved States.

These provisions have not been fully successful. The exporter State has little incentive to impose stricter controls on its industrial sources to benefit another State at the possible expense of its own economic development. At the same time, unreliability and expense of measuring systems make it difficult for the receptor State to prove where the offensive emissions originate. EPA, in turn, may focus on the originating source only and has no flexibility, for example, to allocate emission reductions among several sources, or to involve both the exporter and receptor States in remedial actions. To date, EPA has not published guidance documents or regulations covering interstate pollution complaints, nor has it made a determination on the level of interstate pollution that is unacceptable under the law.

In the 97th Congress, S. 3041 included amendments to interstate pollution control requirements. The bill would have broadened the provisions to include regional sources, as well as individual sources which not only prevent but also "interfere with" NAAQS attainment or maintenance. The bill also would have authorized EPA, when estimating the degree of interstate pollution, to consider information other than that provided by modeling. Such data could have included meteorological factors, economic effects, and pollutant loadings from existing sources.

Alternative Control Strategies. The Clean Air Act allows standards to be met either by low or nonpolluting processes (sometimes called prevention systems) or by limiting end-of-process emissions. Its implementation and enforcement procedures, however, as well as tax laws and statutory Federal financial assistance programs for industry, appear to favor the latter, even though nonpolluting production processes may be more effective and less costly. The bias toward "the end of the pipe" is apparent, for example, in the fact that the process of obtaining EPA approval of a proposed add-on control system based on existing technology is relatively straightforward, while persuading a State and EPA of the efficiency of a low or nonpolluting production process entails a complicated, lengthy and therefore costly, procedure. Furthermore, accelerated depreciation for equipment which only controls emissions is available under the Tax Reform Act; States and many municipalities also provide tax benefits for such technology and may sell Industrial Development Bonds to finance it. By contrast, nonpolluting production equipment is eligible for regular depreciation rates and schedules only.

Committee bills in the 97th Congress did not address the prevention-versus-emission limits issue. However, an individual bill, S. 169, would have required EPA to certify that process changes qualify as pollution abatement techniques. The bill sought to modify the current tax policy of limiting tax-exempt financing to "end-of-the-pipe" pollution controls.

MAJOR ISSUES AND PENDING ACTIONS

All the issues debated in the 97th Congress in searching for a compromise amendment bill remained unresolved when consensus could not be reached. It was not clear at the end of the Congress how much impetus existed to take up these complex issues again. Attention was shifting toward a more specific air quality issue with deep relevance to energy: measures to achieve and pay for a reduction in acid rain. That issue is discussed in the next section.

Acid Precipitation*

BACKGROUND

Acid precipitation may be one of the most significant environmental issues of the new decade. Acid precipitation results from oxides of sulfur and nitrogen reacting with water vapor in the atmosphere. These pollutants are produced primarily by the combustion of fossil fuels in powerplants and industrial boilers, in automobiles, and in smelting processes. Many believe that its potential for damage to crops, forests, soil fertility, lakes and fish populations, and materials is great.

At least partial control of pollutants causing acid precipitation is possible, but at some cost to electricity consumers. Utilities can reduce SO2 emissions by several means, including fuel switching to lower-sulfur coal, coal washing, scrubbing, and new technology which causes the sulfur to adhere to the fly ash so that it does not enter the atmosphere at all. Nitrogen oxides control is also available through relatively inexpensive combustion modifications (less than .1 mill/kwh). Similar reductions are possible from commercial and industrial emitters as well.

Causes. Sources have not been completely identified, but in the Eastern U.S. about two-thirds are in the form of acid sulfates, and about one-third is in the form of acid nitrates. In the West, nitrates make up more than half the acid precipitation. Acid sulfates are thought to be transformation products of sulfur oxides coming from industrial sources, such as electric powerplants, smelters, coking ovens, and others. Similarly, acid nitrates are believed to be transformation products of nitrogen oxides which originate not only in stationary sources, such as electric utility powerplants, but also in industrial boilers and in mobile sources, such as automobiles, and possibly from agricultural fertilizers. 1/

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In each case, the sulfur or nitrogen oxide pollutants rise into the atmosphere and travel with prevailing winds for distances possibly extending to thousands of kilometers, all the while reacting with water vapor and changing into acid sulfates and nitrates and eventually coming back to earth in the form of acid deposition.

Although much of the pollution emitted by powerplants and other industrial and mobile sources undergoes this long-range transport and transformation, about one-half may return to earth within 30 to 50 kilometers of the source. Therefore, the acid deposition problem is also one of local concern.

Effects of Acid Precipitation. Acid rainfall and snowfall may cause a number of serious environmental problems including damage to crops and forests, decreased soil fertility, sterility of certain lakes, and corrosion to manmade materials.

Certain particularly susceptible lakes, found primarily in the Adirondack Mountain region of the United States, in eastern Canada, and in southern Sweden, have become devoid of all fish life. These lakes are located in geological areas where there is a lack of natural neutralizing minerals, such as limestone. Thus, the lakes continue to get a heavy dose of acid, particularly during the spring runoff from melting snow, and have no means of recovering naturally.

There is considerable evidence that, under conditions of increased acidity, certain elements, normally locked into minerals in the soil and lake bottom sediments, are mobilized. Aluminum is one of these and it appears that the sudden increase in the concentration of aluminum in a lake during the spring melt of the snowpack is a major cause of damage to fish populations. Mobilization of mercury from lake bottom sediments is another potentially serious problem.

Plant growth is also affected by acid precipitation. There is increasing evidence that trees, especially conifers growing in regions of acidic soil low in calcium, potassium, magnesium and nitrogen, may be particularly sensitive to acidity increase.

1/ Interagency Task Force on Acid Precipitation. Annual Report 1983. Washington, D.C. 1983. p. 14.

In general, the 1977 Clean Air Act Amendments provide for attainment of primary air quality standards designed to protect human health by 1982. However, there is no fixed date for attaining the secondary air quality standards which are set at levels to protect plants, animals, materials, and aesthetics from effects of air pollution. Effects from acid precipitation generally fall into this category.

Under the Clean Air Act Amendments of 1977, EPA has adopted emission standards for new coal-fired powerplants. These standards, established to implement the policy of requiring the best available control technology on all new coal-burning plants, will reduce emissions of sulfur dioxide from new plants by 55 percent, nitrogen oxides by 20 percent, and particulates by 70 percent compared to current standards. For sulfur, these standards will require removal of at least 70 percent of the sulfur from all coal, regardless of its sulfur content, and 90 percent from high-sulfur coal.

It will be many years, however, before this policy will pay dividends. Most of the pollution will continue to come from older, largely uncontrolled plants. In March 1979, only 8 percent of all coal-fired electricity in the United States came from powerplants with scrubbers. Even in 1995, plants now in existence will account for 73 percent of sulfur oxide emissions. Because of the continued existence of older, uncontrolled plants, and due to the continued and increasing use of coal to generate electricity, EPA predicts that sulfur dioxide levels will continue at present levels while nitrogen oxides emissions will rise by about 50 percent over the next 20 years. Most of this increase will come from stationary, rather than mobile, sources of NOx. The increase in nitrogen oxides is due primarily to the lag in the United States in implementing state-of-the-art nitrogen oxide control measures.

President Reagan's Administration has not proposed specific changes to the Clean Air Act. However, in a 1981 set of "principles" that would guide it in working toward amending the law, the Administration proposed that research on acid precipitation be accelerated, but did not support any regulations.

Title VII of the Energy Security Act (P.L. 96-294) established a comprehensive ten-year program to identify the causes and effects of acid precipitation and to identify actions to limit or ameliorate its harmful effects. The Act created an Acid Precipitation Task Force, having the heads of the Department of Agriculture, the Environmental Protection Agency, and the National Oceanic and Atmospheric Administration as joint chairmen.

The task force was to develop a comprehensive research plan, which is to include programs for:

(1) identifying the sources of atmospheric emissions contributing to acid precipitation;

(2) establishing and operating a nationwide long-term monitoring network to detect and measure levels of acid precipitation;

(3) research in atmospheric physics and chemistry to facilitate understanding of the processes by which atmospheric emissions are transformed into acid precipitation;

(4) development and application of atmospheric transport models to enable prediction of long-range transport of substances causing acid precipitation;

(5) defining geographic areas of impact through deposition monitoring, identification of sensitive areas, and identification of areas at risk;

(6) broadening of impact data bases through collection of existing data on water and soil chemistry and through temporal trend analysis;

(7) development of dose-response functions with respect to soils, soil organisms, aquatic and amphibious organisms, crop plants and forest plants;

(8) establishing and carrying out system studies with respect to plant physiology, aquatic ecosystems, soil chemistry systems, soil microbial systems, and forest ecosystems;

(9) economic assessments of (A) the environmental impacts caused by acid precipitation on crops, forests, fisheries, and recreational and aesthetic resources and structures; and (B) alternative technologies to remedy or otherwise ameliorate the harmful effects which may result from acid precipitation;

(10) documenting all current Federal activities related to research on acid precipitation and ensuring that such activities are coordinated in ways that prevent needless duplication and waste of financial and technical resources;

(11) effecting cooperation in acid precipitation research and development programs, ongoing and planned, with the affected and contributing States and with other sovereign nations having a commonality of interest;

(12) analyzing the information available regarding acid precipitation in order to formulate and present periodic recommendations to the Congress and the appropriate agencies about actions to be taken by these bodies to alleviate acid precipitation and its effects.

Furthermore, subject to certain limitations, the plans to be developed by the task force were to include provisions for financial resource and technical program management of Federal acid precipitation research and development.

The comprehensive plan was to have been submitted in draft form to Congress, and for public review, within six months after enactment of the Act (Dec. 31, 1980). It was to be available for public comment for 60 days after submission and was to be presented to the President and to Congress 45 days later. The fiscal plan was presented in June 1982.

The plan was to be the basis for authorization and appropriations for the remaining ten years of the program.

The law authorized for appropriation to the National Oceanic and Atmospheric Administration $5 million for FY81 to carry out the mandates of Title VII. $45 million was authorized for the remaining nine years of the program, but funding is to be through annual appropriations.

The task force is required to report annually, by January 15, its progress and recommendations. The first annual report of the task force was submitted in January 1982.

LEGISLATIVE INITIATIVES

The primary acid rain legislation in the 97th Congress was contained in section 120 of Title I, S. 3041--the Clean Air Act Amendments of 1982. This portion of the bill would have established a 31-State acid deposition impact region in which SO2 emissions must be reduced by 8 million tons over a 12-year period. With two exceptions, increases in SO2 emissions from either existing or new sources must be offset by reductions from other sources. Offsets were not required in States where all utility boilers already meet an emission rate of 1.2 lbs. per million Btu's or if any increase in SO2 were caused by conversion to coal by a coal-capable utility boiler. In the latter case, reductions would have been required only to the extent that the emission rate exceeded 1.5 lbs. per million Btu's.

The bill would have placed a cap on nitrogen oxides emissions, requiring offsets for new increases. Emission increases resulting from coal-capable boilers being converted to coal would have been exempt. The bill called for the governors of the States in the 31-State region to enter into negotiations to allocate the required reductions. In the event they are unable to do so, the bill would have mandated proportional to each State's emissions in excess of a 1.5 lb. per million Btu rate. Noncompliance would have resulted in the imposition of an emission rate of 1.2 lbs. per million Btu on each noncomplying utility's entire system. The bill also would have required an accelerated research program, as well as a number of studies including one to examine the feasibility of a system of fees on electrical generation in the acid deposition impact region as a measure of equitably financing required reduction. Finally, EPA would have been given authority to make grants to States to conduct demonstration projects to restore damaged aquatic ecosystems. It provides $5 million per year for three years to do so.

S. 1709, introduced in the Senate by Sen. Moynihan, and its companion bill in the House, H.R. 4936, introduced by Rep. Scheuer, also would have established an "acid-precipitation mitigation region," identical to that specified in S. 1706. In these bills, over a ten year period sulfur dioxide emissions from stationary sources in each State within the region were to be reduced by 85 percent from the actual 1980 sulfur-dioxide emission level, ignoring emissions from sources that are complying with new source performance standards. Limits were to be placed on reductions required for States with relatively low average statewide sulfur dioxide emission rates (two pounds sulfur dioxide per million Btu's or less). EPA was to establish the emission reduction requirements which would have then become part of the State's Implementation Plan. The plan would have included schedules, timetables, and other enforceable measures. Trading of emission reductions, as well as other emission reduction measures similar to those mentioned in S. 1706 would have been encouraged. Nitrogen oxides reductions would have been substituted for SO2 reductions, on a two-to-one basis, as in S. 1706.

H.R. 4816, introduced by Rep. D'Amours, would have established the same 31-State (plus D.C.) acid mitigation area as specified in the previously mentioned bills and would have required emission reductions of SO2 reduction was specified as an amount equivalent to the reduction which would be achieved if certain requirements were applied to certain specified sources. These sources were divided into two groups. The first group included the 50 steam-generation units in the mitigation area which had the highest annual emissions of SO2 for the calendar year 1980 and which are not subject to new source performance standards. The second group included all other electricutility steam-generating units in the area having a capacity of more than 100 Megawatts and which were not subject to new source performance standards. For the units in the first group, reduction of 85 percent in baseline emissions was to be applied (but not less than 0.6 pounds SO2 per million Btu's) or an emission standard of 1.2 pounds SO2 per million Btu's (averaged over 30 days), whichever was lower. For the second group, an emission standard of 1.2 pounds SO2 per million Btu's applies. These calculations were to be used to determine the levels of emission reductions which are to be achieved through State Implementation Plans. Emission reductions were to be achieved by 1990. Schedules were to be developed which will achieve substantial reductions in each of three three-year periods. Baseline emissions for any unit were to be the lesser of: (1) actual emissions of SO2 during calendar year 1980; or (2) the allowable emission limitation (if any) applicable to that unit under the applicable State Implementation Plan in effect on Dec. 31, 1980. State Implementation Plans would have called for a number of emission reduction techniques including but not limited to: trading or emission reductions; energy conservation actions resulting in lower emissions; early retirement of generating units; and others. Sources would have been required to conduct continuous emissions monitoring. This bill also would have established an EPA-administered emissions reduction credit program with five regions in which emission reductions were to be formally recorded, banked, traded, and sold.

H.R. 4829, (Rep. Moffet) was similar to S. 1706 in that it called for a ten-million-ton reduction in SO2 emissions within ten years to be accomplished through State Implementation Plans and had a Federal preemption provision (if necessary). However, it also had a provision establishing an emission reduction credit program similar to that found in H.R. 4816.

H.R. 5555 was the version of the Clean Air Act Amendments introduced by Rep. Waxman. It deals with acid precipitation by including the Moffet bill in its entirety as section 103. It also strengthens the existing Act in its ability to deal with interstate pollution by amending section 126.

Senator Danforth introduced 2594, which called for a 7.5-million-ton reduction in an "acid-deposition impact region," consisting of 22 eastern States. The bill also would have established a "secondary acid deposition impact region" consisting of the nine other States east of or bordering the Mississippi River. If a planned study were to indicate that the secondary States should be included in an acid-rain program, those States would have been to reduce SO2 emissions by 2.5 million tons, bringing the total reductions to 10 million tons. To fund these reductions, the bill would have established an Acid Deposition Reduction Trust Fund in the Treasury. The fund would have received its money through a fee on every utility which sells electricity in any State in the acid deposition impact region, based on the amount of electricity sold.

S. 2959 (Randolph) called for a speed-up in acid research with a report from EPA within five years on (a) effects, (b) area effects, (c) atmospheric transportation and transformation processes, (d) methods for controlling precursors, (e) relative importance of local versus distant sources of acid rain precursors, and (f) recommendations on controlling acid rain precursors. The bill would have placed a lid on SO2 emissions at current allowable SIP limits, except for coal conversions, and would have provided grants for limiting of lakes affected by acid rain.

Other bills, H.R. 3471 (Rep. Broyhill) and H.R. 5055 (Rep. Rahall et al.) called for accelerating the research program on acid precipitation originally established in Title III of the Energy Security Act of 1980 (P.L. 94-294) by reducing the program timeframe from ten years to five. H.R 4830 (Rep. Gregg) called for strengthening the R&D program on acid precipitation and would establish a process for arriving at control strategy decisions more expedi~~it~~iously.

H.Con. Res. 152 expressed Congress' concern over the international aspect of acid precipitation and calls for the establishment of a North American Air Quality Commission.

H.R. 1031 indirectly affected the acid precipitation problem by calling for grants for sulfur removal at coal burning powerplants, and for coal preparation (coal washing) facilities.

S. 2027 (Sen. Byrd) also would have accelerated acid precipitation research and would have provided for examination of certain acid precursor control technologies.

Finally, S. 723/H.R. 946 would have amended the Act to control air pollution in border areas of the U.S. and countries contiguous to the United States.

Introduced by Sen. Mitchell, S. 1706 would have established a region called the "acid-deposition impact region" which includes the 31 States (plus the District of Columbia) bordering on or east of the Mississippi River. Within this region, emissions of sulfur oxides and nitrogen oxides from stationary sources were not to grow beyond those levels actually emitted as of Jan. 1, 1981. Furthermore, sulfur dioxide emissions were to be reduced over a ten-year period by ten million tons from levels emitted in calendar year 1980. Each State's share of the ten million ton reduction was to be determined by multiplying that figure by the ratio of that State's actual utility emissions in excess of 1.2 pounds of sulfur dioxide per million Btu's (the new source performance standards for coal-fired power plants) to the total actual utility emissions in the 31-State region in excess of the 1.2 standard. Interstate agreements to reallocate reduction requirements are allowed. The States were to adopt enforcement procedures within two years, after which the EPA Administrator is to approve them within four months, providing: (1) the measures call for enforceable, continuous emission reduction; (2) they establish emission monitoring; and (3) they are adequate to achieve the reduction goals. The emissions limitations and schedules then would have become part of each State's Implementation Plan. Should a State fail to comply with the above, Federal preemption was to follow. Enforceable emission reduction programs were defined as: least emissions dispatching; early retirement of older polluting sources; investments in energy conservation measures which lead to emission reductions; trading of emission reduction requirements; and precombustion cleaning of fuels. Reductions in oxides of nitrogen would have been substituted for sulfur dioxide reductions on a two-to-one basis by weight.

The Clean Air Act Amendments (S. 3041) reported by the Senate Environment and Public Works Committee incorporated a modified version of the Mitchell bill (S. 1706). It called for an 8-million-ton reduction in SO2 emissions over a 12-year period in a 31-State acid rain mitigation area. It would have increased funding for research and would have shortened the deadline for final reports providing results of research and would have shortened the deadline for final reports providing results of research. It would have placed a cap upon NOx emissions, but did not allow substitution of NOx for SOx. It did allow interstate trading. Costs for such a modified program would have been significantly less than those estimated for the original Mitchell bill. The provisions are extensively discussed in the report (S. Rept. 97-666) to the bill.

Onshore Petroleum Leasing*

BACKGROUND

Petroleum leasing has been a major issue for the past decade because of the need to increase domestic oil and gas production to reduce the demand for imported oil. Most of the major remaining prospects for commercial oil fields lie on Federal lands in the Western United States, in Alaska, or on the Outer Continental Shelf (OCS). The high prices of crude, on which Federal royalties are based, have meant that the revenues from the sources were much greater than previously expected, which was welcome news to a succession of administrations that have used that "windfall" to partially offset budget deficits.

The petroleum leasing program, which is administered by the Interior Department's Bureau of Land Management and the Minerals Management Service, generated about $8 billion in FY81 and $9.3 billion in FY82, although the Administration plans to double that in FY83. The Interior Department almost always collects more money than it spends, making it one of the few departments to actually make a profit each year. Because this revenue is so important in reducing budget deficits, numerous suggestions have been made to increase it. These have included increasing the royalty rate on noncompetitive leases, raising the royalties on all leases, accelerating the leasing schedule so more tracts are offered each year, making all leases competitive, offering desirable tracts that had been previously withdrawn from leasing, and raising the application and rental fees. The raising of the fees was opposed by independent oil companies because they claimed it represented a sizable increase in their costs of doing business, and it was favored by the major oil companies who saw it as a way to reduce speculation in oil lands by individuals who have no intention of developing them.

Previous success with lease sales during periods of oil shortages may have led to a disproportionate dependence on this source of revenue and expectations for future revenues based on overly optimistic assumptions. In an attempt to limit the size of future lease sales, environmentalists have pointed out that in recessionary times an accelerated leasing program, as proposed by the Reagan Administration, may not produce the expected revenue but instead may reduce long-term revenue by flooding the market and depressing bids.

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* By David M. Lindahl, Environment and Natural Resources Policy Division.

The main concern of both the major and the independent oil companies was access to the Federal lands with the greatest oil potential. The Douglas Arctic Wildlife Range in Alaska, for example, may well contain as much as ten billion barrels of oil (the equivalent of Prudhoe Bay, which adjoins the western boundary of the range). Because it and other areas, such as parts of the Rocky Mountain Overthrust Belt and numerous wilderness and potential wilderness areas, totalling almost one-third of the Federal lands, have been withdrawn over the past two decades from leasing, a large supply of oil and gas cannot be tapped. Even when lease sales are held, legal challenges, often on environmental grounds, can delay actual drilling for years.

Despite criticism by environmentalists of the existing leasing system, however, there has been considerable reluctance on the part of a succession of Congresses and Administrations to substantially alter the leasing program. The leasing philosophy of the Reagan Administration is to maximize leasing of all Federal lands having resource potential, so that the benefits of production can be achieved as early as possible. This policy, which increases industry access to Federal lands and revenue to the Government, has drawn stiff opposition from environmentalists who fear environmental degradation in the form of oil spills, access roads in wilderness areas, and disruption of wildlife habitats. As a result, the ambitious leasing schedule announced by the Interior Department is facing some challenges. Under congressional pressure, the Department has already revoked plans to lease certain areas and to permit exploration in wilderness areas.

Oil and mining companies complain that their exploration and development activities in designated wilderness areas have been effectively excluded as a result of excess government restrictions. There has been almost no mining and very little oil exploration allowed on either BLM designated wilderness areas (12,000 acres) or on the 25 million acres of national forest wilderness. Oil and gas leasing, however, is occurring on Forest Service and BLM lands which are being studied for inclusion in the wilderness system.

Industry and wilderness advocates disagree on the compatibility of exploration activities with wilderness values. They further disagree on the value of focusing the access debate on wilderness areas which make up only three percent of the Nation's land. Environmentalists cite a recent study by the Oak Ridge National Laboratory of the oil and gas potential in the 23 million acres of BLM land under wilderness review which says that this land represents less than one percent of the Nation's potential energy resources.

LEGISLATIVE INITIATIVES

Representative James Santini, Chairman of the Mines and Mining Subcommittee, introduced a bill (H.R. 3364) that would have extended the 1983 deadline on mineral exploration in wilderness area for ten years. In 1981, the House Interior Committee withdrew several wilderness areas in Montana from oil and gas leasing and passed a resolution requesting in moratorium on further leases after the three leases were approved in the Capitan Wilderness in New Mexico. Secretary Watt agreed not to issue any more leases until the end of the 97th Congress. At first, the administration favored a 200-year extension of the 1983 deadline, but it later proposed a ban on oil and gas leasing in most wilderness areas in the lower 48 States until the year 2000. H.R. 5603 would have allowed the President to open any wilderness area if he found there were an urgent national need for specific mineral resources; would have given Congress until the end of 1984 to act on the Forest Service's "RARE II" wilderness recommendations, would have ruled out any further wilderness review of national forest lands, and would have allowed the Interior Department to release without Congressional approval BLM lands studied for wilderness designation but found unsuitable. Conservation groups strongly opposed the bill. They argued that it would provide less protection than the current law and would severely restrict later wilderness additions for national forest and BLM lands.

Bills were introduced by Representatives Hendon, Forsythe, Seiberling, and Lujan and Senator Jackson to withdraw wilderness lands, lands recommended for wilderness designation, and wilderness study areas from the operation of the mining and mineral leasing laws and from energy and mineral exploration and development activities. They would have permitted inventorying of resource values and certain activities not requiring surface occupancy in such areas. It would have exempted certain lands from withdrawal under this Act and would have provided for the release of lands not recommended for, or designated as, wilderness for non-wilderness uses. Review of the RARE II final environmental statement would have have been prohibited as would any further roadless area review and evaluation of national forest system lands without express Congressional authorization. Serveral bills were also introduced which would have prohibited oil and gas leasing in specific States.

The most important leasing ban was contained in H.R. 7356, introduced by Representative Yates and Senator McClure as part of the $7.4 billion Interior Department appropriation bill, was signed into law (P.L. 97-394) at the close of the 97th Congress. Under its provisions, oil and gas leasing will be banned through FY 1983 in designated wilderness, designated wilderness-study areas, and Forest Service further-planning areas. Valid leases that existed at the time of enactment, however, will be protected. Language was added by Senator Johnston which amended the Alaska National Interest Lands Conservation Act so that only firms that pay a reasonable price to the Department of the Interior for geophysical data would be allowed to bid on a tract in the Alaska Wildlife Refuge. This was added to encourage firms to do their own exploration by insuring that competitors could not get their information free of charge.

A number of bills were offered which would have changed the way in which royalties from Federal oil and gas leases are collected. One such bill, H.R. 5121 by Representative Markey, would have provided for a comprehensive accounting system for Federal mineral interests. It would have amended the Mineral Leasing Act of 1920 to require 50 percent of all money collected in connection with public land sales and rentals to be paid to the State within which the lands is located, except for Alaska, which would have been 90 percent. It would also have raised the royalty rate from the current 12-1/2 percent to 16-2/3 percent. The Federal Oil and Gas Royalty Management Act, S. 2305, by Senator McClure, would have set site security and oil and gas documentation requirements and would have allowed motor vehicles to be stopped and inspected for documentation for probable cause, both on and off the site. Stiff penalties would have been provided for violations.

A royalty bill which did become law (P.L. 97-94) was H.R. 4591, introduced by Mr. Hammerschmidt. It amends the Mineral Leasing Act for Acquired Lands to require receipts received from leases on lands acquired for military or naval purposes, except the Naval Petroleum Reserves and National Oil Shale Reserves, to be paid into the Treasury of the United States and disposed of in the same manner as similar receipts under the Mineral Leasing Act of 1920.

PROSPECTS AND PENDING ISSUES

Despite the public laws passed with respect to leasing, all of the leasing issues are likely to reappear in the 98th congress. Those that were not resolved such as royalty reform, both sharing with the States and increasing the maximum royalties, will probably continue to draw support. Withdrawn nonwilderness lands will probably be the subject of legislative attempts to make them available for exploration. Even issues such as leasing in widerness areas is almost certain to become an issue again in the 98th Congress because of the temporary nature of the ban that was imposed.

Oil Shale Leasing*

BACKGROUND

The Secretary of the Interior also has the responsibility for leasing and managing the publicly owned oil shale lands. Thus far, only 20,000 acres (or one percent) of these lands, which contain the thickest and richest U.S. oil shale deposits, have been leased to the private sector through the Department of the Interior's (DOI) Prototype Oil Shale Leasing Program. DOI is currently considering the lease of additional tracts under its prototype program, as well as the creation of a permanent oil shale leasing program. The principal concerns associated with oil shale leasing are: (1) the appropriate extent and timing of future oil shale leasing activities, (2) State and local governmental concerns regarding future leasing, and (3) the environmental protection of the areas where oil shale extraction would occur.

LEGISLATIVE INITIATIVES

In addition to these executive actions, several oil shale leasing bills were introduced. The House of Representatives passed, and the Senate Energy and Natural Resources Committee reported, legislation--H.R. 4053 and S. 1485, respectively--both of which were designed to expedite shale oil production on federally owned lands.

Legislation was also introduced to permit increased oil shale leasing. H.R. 1409, offered by Representative Marriott, would have amended the Mineral Lands Leasing Act to authorize holders of leases of oil shale lands to lease additional acreage for operational purposes, and would have prohibited mining of oil shale on such additional lands leased under this Act. S. 2520, introduced by Senator Hart, would have amended the Mineral Lands Leasing Act of 1920 to authorize the Secretary of the Interior to lease additional lands necessary for the disposal of oil shale wastes and the building of facilities connected with oil shale operations to the holder of a specified Federal oil shale lease in Colorado. Several bills, including S. 1032, S. 1383, and S. 1484 by Senators Jackson, Hart and Warner, would have amended the Mineral Leasing Act to revise the authority of the Secretary of the Interior to lease lands containing oil shale deposits.

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Offshore Oil and Gas Leasing*

BACKGROUND

The development of oil and gas resources in the OCS has become an attractive option for satisfying part of the Nation's energy needs. The attractiveness of this option has increased as the developmental capabilities of the energy companies has improved, thus allowing the extraction of resources in deeper and deeper offshore waters and in OCS regions with less favorable climates.

The Interior Department's Minerals Management Service (MMS), created in 1982, has the primary responsibility for the Federal OCS leasing program. The statutory authority for this responsibility is the 1953 Outer Continental Shelf Lands Act (Chapter 345, P.L. 212, 83rd Congress), and the 1978 Outer Continental Shelf Lands Act Amendments (P.L. 95-372). The 1953 Act established the basic leasing procedures, while the 1978 Act provided for the coordination of OCS leasing and production activities with the affected States and, to a limited extent, local governments. The 1978 Amendments also provided that the leasing program should include an evaluation of the necessary environmental studies and impact statements.

With increasing OCS resource development, however, comes the possibility of increased environmental degradation and competition with other offshore uses. Unrestrained development increases the risk of oil pollution of the oceans and adjacent shores, and poses a risk to species inhabiting these environments. Providing for the protection of the offshore environment are a number of statutes, including: the 1969 National Environmental Policy Act (P.L. 91-190), the 1972 Coastal Zone Management Act (P.L. 92-583), the 1972 Marine Protection Research and Sanctuaries Act (P.L. 92-532), the 1973 Endangered Species Act (P.L. 93-205), and the 1976 Magnuson Fishery Conservation and Management Act (P.L. 94-265).

The Interior Department proposed in 1981 a 5-year accelerated OCS oil- and gas-leasing program which will open up the "frontier areas" of high resource potential, one of the most important of which is offshore Alaska. The goal of the program was to increase domestic energy production raise additional revenues to offset the national debt. Nearly the entire Federal OCS--almost 1 billion acres--will be offered for lease sale. This acreage to be offered in the 41 lease sales from 1982 through 1987 is considerably higher than the 50 million acres offered from 1954 through

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1981. The Interior Department explains this increase by its new strategy of not limiting the areas of exploratory activity as it has in the past. Although this "areawide" approach offers more offshore land for leasing, the Minerals Management Service expects that land actually leased probably will be a "small percentage" of the 1 billion offered.

Opposition to the accelerated leasing program in the 97th Congress focused on a number of issues. Congressional opponents held that the lease sales were too big and were being offered too soon for full State review. They wanted Congress to suspend implementation of the plan until these concerns are addressed. Environmental groups, led by the Sierra Club, testified that taxpayers will lose $77 billion under the accelerated program because increasing lease sales in a recessionary economy will have the effect of lowering bids--to a level perhaps 32 percent below what they might be under the traditional, slower-paced approach. Much of the opposition to the accelerated lease program took the form of litigation to enjoin the carrying out of specific lease sales. The lawsuits usually singled out violations of the Coastal Zone Management Act and the 1978 Outer Continental Shelf Lands Act Amendments.

In addition to proposing the accelerated leasing program, the Administration also threatened to curtail funding of many of the coastal environmental protection programs, such as financial assistance to the States in developing coastal zone management plans, coastal zone energy impact programs, fishery resource protection, and sea grant programs. The threatened cutback in these programs was a factor in the development of proposed revenue-sharing legislation. Most of the proposed OCS revenue-sharing legislation of the 97th Congress would earmark funds derived from OCS leasing and development to finance the threatened coastal protection programs.

LEGISLATION ENACTED

The only enactments of the 97th Congress affecting OCS development were amendments to the FY 1982 and FY 1983 Interior Department appropriations which prevented for two years the use of Interior Department funds for the development of certain OCS lands. P.L. 97-100 specifically prohibited the use of FY 1982 Interior Department funds for the procurement, leasing, bidding, exploration, or development of the Point Arena, Bodega, Santa Cruz, or Eel River basins of the OCS lease sale #53. P.L. 97-394 specifically prohibited the use of FY 1983 Interior Department funds for development of certain Pacific basins off central and northern California and certain Atlantic basins off New Jersey.

LEGISLATIVE INITIATIVES

Several bills (H.R. 5543, H.R. 4597, H.R. 5063, H.R. 5134, H.R. 7077, S. 2129, S. 2792, S. 2794) in the 97th Congress proposed the establishment of revenue sharing in OCS development. The allowable use of the OCS development revenue acquired by the States, however, varied.

Six of the bills--H.R. 5543, H.R. 4597, H.R. 7077, S. 2129, S. 2792, S. 2794--proposed that Congress earmark a percentage of revenues from oil and gas leasing to establish a fund to finance a block grant program to protect ocean and coastal resources. The bills differed in the amount of OCS revenues going into the fund and the mechanism for determining this amount, allocation of this amount among the coastal States and local communities, and the allowable use of the amount among the various ocean and coastal resource protection programs. Of these bills, H.R. 5543 wsa the only one reported out of Committee (House Committee on Merchant Marine and Fisheries). The House passed H.R. 5543 in the second session. The measure proposed the establishment of an Ocean and Coastal Resources Management Fund to provide the coastal States with block grants for ocean and coastal resources management and development. The legislation proposed to finance the program with ten percent of OCS oil and gas revenues, limited only by an annual financing ceiling of $300 million. States could use the block grants to finance coastal zone management, coastal zone energy impact, fishery conservation, and Sea Grant programs.

The other two revenue sharing bills--H.R. 5063 and H.R. 5134--would have earmarked a certain percentage of oil and gas revenues from OCS development for use in acquiring strategic minerals and critical minerals for the national defense stockpile.

PROSPECTS AND PENDING ISSUES

The 98th Congress faces an Administration-sponsored OCS oil- and gas-leasing program which many opponents feel is too much offshore land offered too soon. Lawsuits now in progress have claimed that the Interior Department's accelerated leasing program violates existing coastal protection statutes. Environmental opponents have charged that the program will cost the Federal Government $77 billion in the long term. The issue of the accelerated leasing program is exacerbated by Administration threats to cut back the budgets of many of the coastal protection programs.

Congress may wish to review this opposition to the accelerated leasing program. An important context in which to view this opposition is the price of oil and gas. The recent decline in the price of oil, for instance, may militate against an accelerated program. Another important context in which Congress may wish to view this opposition is coastal environmental protection. The coastal States would probably hold a more sanguine view towards accelerated OCS leasing if they knew that Congress would provide adequate funding for coastal protection programs. In this regard, revenue-sharing legislation may become the key to accelerated leasing.

CHAPTER VIII. ENERGY REORGANIZATION

Introduction

Since the Department of Energy (DOE) was established October 1977, dissatisfaction within its functioning has been expressed in many quartes. Initially, the dissatisfaction centered on the lack of action by the Department to resolve the "energy crisis" which began in 1973 and was reinforced by the oil shortages of 1979. However, in January of 1981, the Reagan Administration suggested an entirely different approach to dealing with energy, attempting to greatly reduce the Federal role. The Department was seen as an obstacle to a more appropriate central role for the private sector in dealing with energy supply and demand. Throughout most of the 97th Congress, the Administration urged dismantlement of the Energy Department. Legislation to transfer most DOE functions to the Department of Commerce was proposed by the Administration in early 1982, and introduced in May. Hearings were held in the House and Senate, but no further action was taken because there was little enthusiasm for the proposal in Congress. However, it was expected that legislation to reorganize DOE functions would be introduced again in the 98th Congress, due to the continued commitment of the administration to the proposal.

Background

The Department of Energy was established by the Department of Energy Organization Act, P.L. 95-91, enacted August 4, 1977. Its establishment was the culmination of a series of five major Federal reorganizations of energy functions that began in 1973 during the energy crisis precipitated by the Arab Oil Embargo. During that period numerous additional energy laws created new energy-related functions as well. The Department consolidated most major energy functions of the Federal Government, and three agencies were transferred entirely to the DOE: the Federal Energy Administration, the Federal Power Commission, and the Energy Research and Development Administration.

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The many efforts to reorganize energy functions over the four years preceding establishment of DOE illustrated a search for a high organizational level commensurate with the central importance that had been given to energy problems. Because the energy crisis was perceived to be of increasingly higher priority among the issues facing the Federal Government, higher and higher levels of organizational focus were sought to deal with it. The Energy Department was viewed by its proponents at the time of its establishment as a final resolution of the search for an organization appropriate to the magnitude of the problem.

At the beginning of the 97th Congress, the Reagan administration espoused a very different approach to energy issues. While advocating primary reliance on market forces and dramatic reductions in the Federal role in energy, the Administration proposed to cut back or to eliminate funding for many energy programs. The Department of Energy was seen in large part as a symbol of the previous Administrtion's energy approach, which involved an active and strong federal role. President Reagan's first Secretary of Energy, James Edwards, took office promising to oversee the dismantlement of his Department.

On Sept. 24, 1981, President Reagan announced in his national address on economic policy that he would soon propose the dismantling of the Department of Enertgy, because "we do not need a Department of Energy to solve our energy problems..." The market place, he indicated, would do that for us.

When the FY83 budget for energy programs was presented in January, 1982, the Administration was preparing legislation to distribute DOE programs among the Departments of Commerce and the Interior, and other agencies. The FY83 budget reflected the arrangement of programs that would be in effect after adoption of the proposed reorganization of energy functions. Therefore, the bulk of DOE's functions in energy research and development, nuclear weapons international issues, emergency preparedness, and energy information, which have to be transferred to the Commerce Department under the proposed reorganization, were included in that Department's budget. The power marketing administrations and the Strategic Petroleum Reserve funding showed up in the Interior Department's budget.

Legislative Initiatives

After submitting the budget, the Administration had difficulty in gaining support for some aspects of the reorganization and, in some cases, for the basic contention of energy having faded from the roster of important national issues deserving a Department to deal with it. The Administration's attempts to allay those misgivings by Members of Congress led to delays. It was not until May 25, 1982, that the President transmitted a plan to Congress. Senator William Roth, Chairman of the Senate Governmental Affairs Committee, introduced S. 2562, which reflected the President's proposal: the Federal Energy Reorganization Act of 1982. On Aug. 11, 1982, the proposal was introduced in the Houses as H.R. 6972 by Representatives Frank Horton and James Broyhill.

The reorganization plan would have transferred to the Commerce Department most of the major functions of the Energy Department, including energy policy energy research and development, nuclear weapons research and development, energy conservation, the Strategic Petroleum Reserve, the Energy Information Administration, and other functions not mentioned below in the transfers to Interior, Agriculture, and Justice. The Federal Energy Regulatory Commission (FERC), formerly the independent Federal Power Commission, would have reverted to its previous independent status.

The major power administrations, marketing primarily hydroelectric power to specific regions of the country, were to be transferred to the Interior Department, where they had been located before the establishment of DOE. These were to include the Western Area Power Administration, the Alaska Power Administration. Also transferred to Interior was the authority to set lease goals, an authority that had previously belonged to Interior.

Transferred to the Agriculture Department would have been the biomass and alcohol fuels programs. The Department of Justice was to be given the functions relating to enforcement and prosecution of violations of pricing regulations incurred under the Emergency Petroleum Allocation Act when it was still in force.

The proposal as finally announced differed in basic approach from the original. After negotiation with the chairmen of the four affected committees in the Senate, the emphasis in the final organization of functions was shifted to the "merger" of functions rather than on "dismantling" the Department of Energy. Senator James McClure, Chairman of the Senate Energy and Natural Resources Committee, in a statement issued when the bill was introduced, said:

> "About all that has really happened in this reorganization is that the Secretary of Commerce and his deputy are substituted for the Secretary of Energy and his deputy, and the lines of authority between the military and civilian programs in the defense and peaceful uses

> of atomic power have been set up in paralled lines of authority within the Department of Commerce. With very few other exceptions, the Department of Energy functions have simply been moved into the Department of Commerce for administration."

There were also some changes in detail. The decision was made to transfer the Strategic Petroleum Reserve to Commerce instead of the Interior Department as originally planned, in order to keep the SPR united with the emergency planning function in Commerce. Another change was in the organization of energy and weapons functions within Commerce. Instead of a large semi-autonomous agency called the Energy Research and Technology Administration (ERTA) containing all the weapons and energy R&D of the former DOE, the final proposal called for two deputy secretaries--one for defense programs, with three assistant secretaries, and one for energy programs, with four assistant secretaries overseeing most of the research and energy policy functions now in DOE.

The Energy Information Administration functions were to be transferred to a Bureau of Energy Information, reporting to the Under Secretary for Economic Affairs.

MAJOR POLICY ISSUES RAISED

During the course of the 97th Congress, several sets of hearings were held on the DOE proposal. For the most part, members of Congress presiding at the hearings were negative or skeptical of the proposal. Favorable comment on the proposal came primarily from Administration witnesses, and a large number of concerns were express by outside witnesses. The issues raised included the following:

Energy Policy

A major question revolved around whether or not the Federal Government should so definitvely alter its role in national energy policy. The DOE was created as a result of widespread consensus that because of the central role and pervasive nature of energy in the national economy, a major department was needed to oversee a national energy policy, to institute research programs on alternative energy, to prepare for energy emergencies, and to speak for the U.S. in the international energy arena. Dismantling DOE would serve to reverse that perception and place a final stamp of approval, symbolically, on the Administration's approach to energy policy. It would place primary reliance on the marketplace to perform most energy functions. Such an abrupt reversal of posture for the Federal Government, and the abandonment of a strong Federal focus in dealing with energy affairs, especially internationally, therefore, has caused some concern for some observers. It was widely believed in Congress that DOE, once dismantled, would be very difficult to reconstruct or retrieve.

In general, the fate of energy policy formulation generally under the proposed dispersion of energy functions was unclear, but it was apparent that at the very least it would fall to a lower administrative level.

Cost Savings

Initially, a major rationale for disbanding the Department of Energy was linked to budget savings. A task force of Energy Department and Commerce Department officials projected a goal of saving about $1 billion over three years as a result of the proposed reorganization. In briefings by Administration officials in March 1982, this figure was offered a major reason for proposing the reorganization of energy functions. This figure also was used in transmitting the legislative reorganization proposal to Congress in May 1982. However, most witnesses from outside the Administration disputed these figures, and an August 1982 report by the General Accounting Office ("Analysis of Energy Reorganization Savings Estimates and Plans") concluded that the savings estimates were not adequately documented and also did not include offsetting expenses involved in reorganization.

Further, the cost savings were in large part due to reductions in programs which were proposed in budget cuts, and which would be acted upon without regard to changes in organization.

On several occasions, Administration spokesmen admitted that cost savings might be negligible, and indicated that the main reasons for urging reorganization were to achieve other goals.

Choice of the Commerce Department

The choice of the Commerce Department for the transfer of major DOE functions DOE raised some major issues. The question of placing nuclear weapons research and production in a trade-oriented department caused some opposition; related regulatory functions with respect to nuclear nonproliferation were perceived as a potential conflict of interest for the Commerce Department. In general, the selection of Commerce was a relatively new approach to the transfer of DOE's functions. Many observers had viewed the Department of the Interior as the likely recipient of these functions, with an independent agency for the weapons and research and development functions the most likely second choice. The choice of Commerce rather than Interior underscored the statements of the Administration that energy is just another factor of production rather than a basic natural resource. This caused opposition from those who argued that energy is much more central, and pervasive, in the National economy and deserved stronger Federal focus than other factors of production, such as steel or wood.

Energy Emergency Management

One of the major reasons for establishing the DOE had been continuing dissatisfaction among policymakers with the Federal capability to deal with energy emergencies, specifically acute shortages of petroleum. Functions and legislation to deal with this problem were a key focus of Department of Energy concerns. In the absence of such shortages during the 97th Congress, this focus on emergencies became less urgent. The Administration, in fact, argues that Federal handling of emergencies was inadequate and that an unencumbered private sector would have done a better job (see chapter IV for discussion of energy emergency legislation). Future emergencies were somewhat discounted in the proposal for reorganization. Thus, opposition to the proposal was voiced by a number of Congressmen who felt that a strong Federal capability would be needed in the event of another energy emergency and that the grouping of functions in DOE provided such a capability; these Members argued that it would be foolish to disband the Department, and they also indicated dissatisfaction with the lack of a clearly identifiable energy emergency function in the proposed new organization.

Energy Information

Another key function within the Department of Energy, which was the focus of considerable attention in the Department of Energy Reorganization Act, was the gathering and analysis of energy data and information. Throughout the years preceding the establishment of DOE, congressional and administrative policy makers felt hampered by the lack of adequate information as a basis for decisions. The Energy Information Administration (EIA) was established within DOE as a semi-autonomous agency with a clear mandate to gather and produce objective, credible information on energy supply and demand and projections of future needs and problems. Under the proposal to transfer DOE functions to the Commerce Department, EIA would be separated from other energy functions. It would become a Bureau of Energy Information, reporting to the Under Secretary for Economic Affairs. Some Members questioned whether or not EIA would be able to retain its independence, whether or not it could defend an adequate budget for carrying out its tasks, and whether or not the programs it had created as a credible source of data for industry and government would continue.

Nuclear Weapons and Other Nuclear Military Programs

The Administration proposed to transfer DOE's nuclear defense programs, together with other programs dealing with civil nuclear power and other energy sources, to the Department of Commerce. This transfer raised a number of questions over the appropriateness of housing a major weapons function in a Department focused on trade. The other major option that had been under consideration rejected in the past because of the strong concern for keeping control of nuclear weapons in civilian hands. With respect to the defense programs, the proposed transfer to Commerce would keep their direction and administration within a civilian rather than a military branch of the Government.

On the other had, critics argued that putting the weapons program into the Department of Commerce would tend to blur the distinction between military and civilian uses of nuclear energy that is fundamental to U.S. non-proliferation policy. They also pointed out that the defense nuclear programs were so different from the other Department of Commerce programs that it might not get adequate attention and direction from top management.

Nuclear trade, cooperation, and non-proliferation

In the Atomic Energy Act of 1954 as amended by the Nuclear Non-Proliferation Act of 1978, Congress assigned substantial responsibilities to the Secretary of Energy for nuclear trade, cooperation, and non-proliferation.

Prospect and Pending Issues

As the 97th Congress drew to a close, it was evident that the Administration had failed to convince Congress that its proposal to merge DOE energy functions into the Department of Commerce had sufficient advantages to win a place on a crowded Congressional agenda. Action on energy budget issues demonstrated the intention of Congress to retain, usually at lower levels, many energy programs that the administration had proposed to terminate.

The proposal to eliminate the Department of Energy was not acted on by any committee in either chamber during the 97th Congress. The administration indicated a desire to re-introduce the proposal in the 98th Congress, but there was no strong impetus to push the measure. It seemed more probable that the Administration, while advocating the energy reorganization proposal, would focus on dismantling DOE's energy programs through the budget process instead.

CHAPTER IX. THE REAGAN ENERGY PROGRAM: A MID-TERM ASSESSMENT

Background

On September 24, 1981, the President stated in a televised address to the nation:

> There is only one way to shrink the size and cost of big government and that is by eliminating agencies that are not needed and are getting in the way of a solution. Now, we don't need an Energy Department to solve our basic energy problem. As long as we let the forces of the marketplace work without undue interference, the ingenuity of consumers, business, producers, and inventors will do that for us.

This statement indicated the direction in which the Reagan Administration intended to take American energy policy. Besides the proposal to abolish the Department of Energy, the main thrust of the Administration's effort was directed toward reducing DOE spending. In its proposed FY82 and FY83 budgets, solar, cnservation, and some fossil programs would have been essentially eliminated and others would have been cut sharply.

The Administration did not achieve the fundamental reorientation of national energy policy it sought. Congress generally rejected the administration's plans to terminate various solar, conservation, and fossil fuel programs along with the energy policymaking infrastructure developed within DOE. It also insisted on some sort of drawdown plan for the Strategic Petroleum Reserve, and continuation of various data collection activities. In January 1981, the Administration announced the total deregulation of oil prices, an action which sped up decontrol by nine months. Two years later, this action remained

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*By Larry B. Parker, Environment and Natural Resources Policy Division.

the most prominently mentioned energy action taken by the Administration. 1/

The Administration, however, was able to use administrative actions and the energy budget to influence government energy-related activity. As outlined in chapter II, it succeeded in convincing the Congress of the need and opportunity for fiscal austerity in the Department of Energy budget. This emphasis began early in term with proposed FY81 deferrals and recessions and continued throughout the 97th Congress. This austerity resulted in reduced government activity in various R&D efforts, particularly near the commercialization stage. Other administrative actions were initiated to reduce the regulation of some energy sectors and to increase leasing from Federal lands. Hence, while the Administration did not dismantle the Federal energy policy structure, it succeeded in reversing its growth, reducing and redirecting some of its activity, and lowering its profile during this period.

To examine the debate over both the locus and content of energy policy, this chapter is divided into three parts. First, the state of energy policy in 1980 and the changes the Administration wished to make in it are reviewed. Second, the various policy impacts of the Administration's first two years are examined. Finally, there is a discussion of the state of energy policy in 1983 and the future congressional role.

ENERGY POLICY TO 1981

Before 1973, U.S. energy policy was fragmentary, with individual fuel sources being the focus of attention. The general philosophy with respect to energy policy was compatible with a world of cheap and secure energy supply. Much decision-making was vested in the private sector and in the marketplace which made the decisions regarding supply and demand. Any government action regarding each fuel source was generally the result of domestic concerns and pressures.

With the 1973 oil embargo, this fragmented system was criticized as inadequate, given the new economic power of OPEC. Indeed, the system did not really provide an organizational base for developing the integrated energy policy both the President and Congress felt was necessary. With national attention focused on that need, there began a decade of contention and confusion over the form that energy policy should take.

1/ See U.S. Department of Energy. Secretary's Annual Report to Congress, August 1982. Also, U.S. Department of Energy. Securing Our Energy Future: The National Energy Policy Plan.

Oil shortages during the summer of 1973 prompted allusions in public statements by President Nixon to the desirability of energy "self-sufficiency," a concept elevated to program status as "Energy Independence" after the onset of the oil embargo. As stated by the President:

> Let us set as our national goal in the spirit of Apollo, with the determination of the Manhattan Project, that by the end of this decade we will have developed the potential to meet our own energy needs without depending on any foreign energy sources. 2/

In a subsequent address, President Nixon concluded by saying that "where energy is concerned, we, the American people, shall be the sole masters of our fate." 3/

The policy response included the establishment of emergency authorities to address immediate shortages, and the infusion of Federal money into longer term research and development. The year 1974 was a banner one for research and development: for solar heating and cooling (P.L. 93-473), geothermal energy (P.L. 93-410), electric and hybrid vehicle research (P.L. 94-413), among others.

Federal spending for alternative energy research and development increased in subsequent years, as the Federal role in energy policy increased. Price and allocation controls remained on crude oil and some petroleum products, particularly gasoline; price controls remained on interstate sales of natural gas. Shortly before leaving office, President Ford characterized the continuing dispute over energy policy during his term as resulting from "differing views as the appropriate role of the Federal Government." The President maintained that the primary responsibility for energy should "continue to rest with the private sector," and warned against thoughtless expansion of the Federal role. 4/

However, the National Energy Plan submitted by President Carter to Congress in April 1977, proposed to vigorously expand the Federal role in energy policy. As its first principle, the plan stated that ". . . the energy

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2/ Nixon, President Richard M. Address on the Energy Emergency. November 7, 1973. Appearing in: U.S. Congress. Committee on Energy and Natural Resources. Executive Energy Document. July 1978, Publication No. 95-114. 95th Congress, 2nd session. p. 86.

3/ Ibid., p. 118. Address given January 19, 1974.

4/ Ibid., p. 356.

problem can be effectively addressed only by a Government that accepts responsibility for dealing with it comprehensively." 5/ In part, President Carter proposed to use authorities established by prior enactments. However, the National Energy Act extended Federal authorities to govern energy decision-making by industry, institutions, and individuals in several areas. The Powerplant and Industrial Fuel Use Act (P.L. 95-620) established authorities whereby the Federal Government could require electric powerplants and major fuel-burning installations to use energy sources other than natural gas or petroleum. The Natural Gas Policy Act (P.L. 95-621), while providing for eventual deregulation of most natural gas, placed previously unregulated intrastate gas under regulation. The Energy Tax Act (P.L. 95-618) established an excise tax on the purchase of fuel-inefficient cars. President Carter did not receive everything he requested, but he did significantly expand the Federal role in energy policy.

This trend toward increasing Federal intervention in energy policy represented an attempt to resolve the interlocking network of contradictory concerns surrounding energy policy, including national security, the economy, equity, and resource conservation and the environment. In attempting to accomplish this goal, three Administrations developed energy "packages" designed to meet the objective of reducing oil imports, but with "due" concern for the other facets of energy policy. With the passage of the Energy Security Act of 1980 (P.L. 96-294), some observers felt that a consensus on a comprehensive energy policy had evolved. Subsequent events, however, have shown that assumption to be overly optimistic.

5/ See: U.S. Congress. Committee on Energy and Natural Resources. The President's Energy Program. May 1977. Publication No. 95-16. p. 16.

The Reagan Energy Program

In July 1981, the Reagan Administration unveiled its national energy plan (NEP III). Many had hoped that the plan, which is required by Congress every two years, would provide the country and the Congress with specifics regarding the Administration's view toward issues such as natural gas decontrol, the Clean Air Act, and emergency preparedness. However, rather than outline a plan of legislative action, the Administration's "National Energy Policy Plan" was a statement of economic philosophy:

> The Administration's reformulation of policies affecting energy is part of the President's comprehensive Program for Economic Recovery, which includes elimination of excessive Federal spending and taxes, regulatory relief, and a sound monetary policy. When fully implemented, the Economic Recovery Program will release the strength of the private sector and ensure a vigorous economic climate in which the Nation's problems, including energy problems, will be solved primarily by the American people themselves--consumers, workers, managers, inventors, and investors. 6/

By making energy policy a subset of economic policy, the Administration was de-emphasizing energy as an special or unique issue requiring special consideration. This de-emphasis on energy policy was to be manifested by a reduced role for the Federal Government. As stated in NEP III:

> Public spending for energy-related purposes is secondary to ensuring that the private sector can respond to market realities. Even then, Federal spending should be considered only in those promising areas of energy production and use where the private sector is unlikely to invest. . . [U]sing public funds to subsidize either domestic energy production or conservation buys little additional security and only diverts capital, workers, and initiative from uses that contribute more to society and the economy. 7/

6/ U.S. Department of Energy. "Securing America's Energy Future: The National Energy Policy Plan." page 3.

7/ Idem.

Essentially, the Reagan approach to energy policy was to increase the role of the private sector and the marketplace in energy decision-making. As applied to energy policy, the Reagan economic philosophy raised several significant policy issues. Among the more important ones presented in NEP III were the following assertions:

1. Reducing oil imports should not be the driving force for U.S. energy policy. The needs of the economy as dictated by the marketplace should control the importation of oil as any other decision would be economically inefficient.
2. Energy consumption has no moral content. Whether the country chooses to use 80, 100, or 120 quads a year in energy is irrelevant as long as the economy is sound.
3. The principal role of the Federal Government is to increase energy supply through leasing, promoting nuclear power, economic incentives, long-term R&D, and reducing regulation.
4. Equity questions should be dealt with separately, not as part of energy policy. If the poor suffer due to higher energy cost, their needs should be met directly. Distorting the marketplace through government intervention such as price controls, will hinder an economic recovery program designed to help all Americans, including the poor.
5. Government planning is counterproductive to energy policy. Government does not have the insight or knowledge to guide energy policy. Decisions should be determined by the marketplace in response to circumstances as they arise.

OIL IMPORTS AND NATIONAL SECURITY

Reducing oil imports has been a continuing theme in energy policy since the 1973 oil embargo. From "Project Independence" to the "Moral Equivalent of War," Presidents have used the national security aspect of energy policy to justify their proposed energy policies. The national security argument was employed, for instance, to enact an $88-billion synthetic fuels effort in 1980. 8/ As stated by the Congress in the Energy Security Act:

8/ For a discussion of the debate on title 1 of the Energy Security Act, see Parker, Larry and Rothberg, Paul. In Energy Initiatives of the 96th Congress. Prepared for the Senate Committee on Energy and Natural Resources. 97th Congress, 2nd session. committee print.

> The purpose of this title, and the amendments made by this title, are to utilize to the fullest extent the constitutional powers of the Congress to improve the Nation's balance of payments, reduce the threat of economic disruption from oil supply interruptions and increase the Nation's security by reducing its dependence upon imported oil. 9/

The Reagan Administration felt that such an all-out effort to reduce oil imports was economically inefficient and would not significantly decrease U.S. vulnerability to oil disruptions. Reducing oil imports "at any cost is not a major criterion for the Nation's energy security and economic health." 10/ To the extent that imported oil was overpriced vis-a-vis domestic alternatives, it would be replaced by market forces in search of the cheapest form of energy. The Administration attributed part of the downward movement in oil imports to the economy making these types of adjustments. During disruptions, primary reliance should remain with the market to allocate supply supplemented by the Strategic Petroleum Reserve and private stocks.

Such a philosophy disturbs some who feel the approach ignores the complexity of the market and historic consumer behavior. Critics of a strict free-market approach argue that social institutional variables can frustrate the selection of economically efficient alternatives. For example, the Administration believes that market economics is sufficient to spur conservation. Yet, when individuals rent their residences or commercial space, neither the tenant nor the building owner may have an incentive to save energy. Tenants have no incentive to make energy efficiency improvements on buildings they do not own, and owners have little incentive to make improvements if the tenants are paying the bill. 11/

A second concern of critics is that an energy policy which bases decisions about oil consumption primarily on

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9/ P.L. 96-294, sec. 100(b)(1).

10/ U.S. Department of Energy. Securing America's Energy Future: The National Energy Policy Plan, page 2.

11/ For other institutional barriers, see Carl Blumstein, "Social and Institutional Barriers to Energy Conservation." In Forecast--Volume II: Energy Conservation in Cities, by the Congressional Research Service for the House Committee on Science and Technology. 95th Congress, 2nd session, December 1978. committee print.

the basis of economic "rationality" may ignore the national security interest in reducing the nation's dependence upon imported petroleum. This concern is heightened by the current stabilization of oil prices. If price stabilizes over a period of time (as it did in the mid-to-late 1970s), consumers would become less sensitive to the need to conserve oil and less inclined to convert from oil to other fuels.

NORMATIVE JUDGMENTS AND THE ROLE OF GOVERNMENT

Differences in energy policy between the Reagan and Carter Administrations can be explained by a conflict in social values and outlook. During his Administration, President Carter hinted that many Americans were profligate and consumed more energy than was necessary to maintain comfort and a reasonable quality of life. The novelty in President Carter's pronouncement was its "ascetic" flavor. The Carter Administration suggested that Americans should lower their expectations and consume less energy--not only because it would save money, but because the Nation would be morally richer for doing so. In his address to the Nation on April 18, 1977, President Carter observed, "I think most of you realize that a policy which does not ask for changes or sacrifices would not be an effective policy at this late date. . . . I have faith that meeting this challenge will make our own lives even richer." 12/

The Reagan Administration rejected this view of energy consumption. Energy consumption per se had no normative content. Rather, a growing economy was the object of Administration policy. Economic growth was the social value of concern to the Reagan Administration, not energy consumption. 13/ To the extent energy facilitates economic growth, it is important. The economy should choose the appropriate consumption level, however, not Government.

Critics of this approach to energy consumption attack either the social value on which it is based (economic growth), or the method of execution (market economics), or both. Some have expressed their concern for growth in a broad spectrum of human activities: population, energy and resource consumption, and even economic growth

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12/ Executive Energy Documents, op. cit., p. 391.

13/ For a discussion of social values and energy policy, see Behrens, Carl. National Goals and Social Values in Energy Policy. In U.S. Energy Outlook: A Demand Perspective for the Eighties. Prepared for the House Committee on Energy and Committee, July 1981, committee print.

most direct impact on America's energy future arises from its position as the steward of the Outer Continental Shelf and. . . publicly controlled land,. . . " 16/ To assist private enterprise in developing the country's natural resources, the Reagan Administration is committed to reducing regulation and facilitating access to public lands. Also, the Administration intends to revitalize the nuclear option, including the breeder, along with emphasis on long-term, high-risk, research and development.

Critics believe that the emphasis on energy supply is misplaced: that conservation is the quickest and cheapest way to meet the country's energy problem. It is conservation, not increased energy supply, which has brought oil imports down to their current level, and proponents of conservation believe that active Federal support for conservation could accelerate this trend.

EQUITY CONSIDERATIONS

A second concern of conservation proponents is equity. The poor face immediate problems regarding energy costs for essential needs such as heating and transportation. They are thus more vulnerable if energy prices go up. Critics say that the Administration's free-market policy and its cuts in direct low-income energy assistance, such as weatherization, may exacerbate the vulnerability of the poor to price increases. They point out that one existing device to encourage conservation, tax credits, is of little use to poor people who do not have the initial capital necessary to make improvements. Hence, conservation proponents consider essential an active Government role in enabling low-income families to respond to rising energy prices with conservation measures.

The Administration agrees that the poor may suffer disproportionately because of rising energy prices. However, the Administration believes that the best way to deal with the problem is through the Administration's overall social policy, particularly through block grants to the States. Although the Administration proposed significant cuts in such block grant programs, it believes that the greater efficiency achieved by having the States administer the programs would make up the loss.

GOVERNMENT PLANNING

Reliance on the market to direct policy is the backbone of the Administration's approach to energy policy. As stated in NEP III:

16/ Department of Energy. Security America's Energy Future: The National Energy Policy Plan. page 1.

> Computers cannot gauge human reponse to future situations with precision. This is the key explanation of why projections of future energy consumption and production have been so often wrong, although there has also been a general bias against market flexibility in the assumptions of many models. Increased reliance on market decisions offers a continuing national referendum which is a far better means of charting the Nation's energy path than stubborn reliance on government dictates or on a combination of subsidies and regulations. 17/

However, proponents of government planning point out that government is always making decisions which affect the energy market, and hence, it should rely on the best analysis available. As stated by Sheldon Lambert of Shell Oil before the House Committee on Science and Technology:

> While we (Shell Oil) try to plan for future energy market conditions, you in the government, as policymakers and initiators of legislation, in large measure determine the future. Consequently, as part of your deliberations, you must account for the possible effects of your legislation on the United States' energy economic future. It is in this context that energy projections and their supporting models can assist you in determining the magnitude and direction that proposed policy may have when balancing the extremely complex equation of future energy supply and demand. 18/

The discussion below outlines the policy impact of the Administration's energy philosophy on energy activities during the 97th Congress, and examines the situation facing the 98th Congress in directing the country toward a coherent energy policy.

17/ Department of Energy. Securing America's Energy Future: The National Energy Policy Plan. July, 1981. p. 2.

18/ U.S. House. Committee on Science and Technology Energy Demand Forecasting and Its Appropriate Role in Planning and Policy. Hearings, June 1 and 2, 1981.

Policy Impacts

Reflecting the domestic nature of past energy policymaking, discussions of U.S. energy policy have focused on individual fuel sources, particularly oil, natural gas, coal, and nuclear power. However, the Administration's emphasis on economic considerations suggests that it believes all fuel sources should be treated alike, with the marketplace making the decisions on which one should be used in any given situation.

From this perspective, there are five areas of energy-related government activity which cut across the various fuel sources: (1) deregulation, (2) emergency preparedness, (3) Federal budget priorities, (4) Federal leasing of public lands, and (5) Federal energy organization. These categories reflect the Administration's economic philosophy with most of the Administration's energy initiatives falling into one or more of them.

DEREGULATION

In the Administration's view, private enterprise and the marketplace are currently over-regulated. Such regulations either skew the marketplace in favor of some otherwise uneconomic energy source, or are an unnecessary burden on private enterprise. In order to correct these perceived problems, the Administration called for the "deregulation" of several aspects of the energy economy. The goal of deregulation is to increase the role of the market in making energy decisions. As stated earlier, reliance on markets is the backbone of the Administration's economic philosophy. By applying the concept to energy, the Administration feels it will better integrate energy policy with economic policy.

The Administration's concept of deregulation is broad. For energy production, the concept includes reducing or eliminating price controls, more effectively including cost criteria to environmental and health regulations, and reducing reporting requirements. For energy consumption, the deregulation includes easing or eliminating various standards and programs designed to improve energy efficiency.

President Reagan began reducing Federal energy regulation shortly after his inauguration. Effective January 28, 1981, the President exempted gasoline and crude oil from price and allocation controls. The action was presented as a major break with existing policy, although it merely accelerated a phaseout of controls that was scheduled to be completed 9 months later.

Also in the early days of his Administration, the President began a review of Federal regulations with an eye toward making them more cost-effective. In a two-pronged attack, he ordered a moratorium on all new regulations, and for all environmental and health enforcement agencies to review existing regulations, looking to reduce the regulatory burden on private enterprise.

Perhaps the most prominent revision as a result of this reassessment was in the Office of Surface Mining and Enforcement (OSM) reclamation regulations. Believing that OSM had promulgated regulations far in excess of the requirements of the Surface Mining Control and Reclamation Act, Interior Secretary James Watt proposed major changes in the Federal guidelines for surface reclamation. The crux of the new proposals involved replacing the existing "design standards" with "performance standards" which the States would enforce, increasing flexibility in restoring disturbed lands and returning primary enforcement responsibility to the States.

Besides re-examining regulation regarding coal, the Administration pursued efforts to reduced regulation of the nuclear industry. In an October 8, 1981 statement on nuclear power, the President ordered the DOE to recommend reforms to reduce licensing time for new power plants. Although some proposals were floated resulting from this, no legislative initiatives have resulted from it.

This attempt to reduce regulation of energy production was aimed at increasing energy production. In the area of energy conservation, the Administration attacked regulations designed to promote, not discourage, energy efficiency. The Administration believed that such regulations were ill-conceived and unnecessary. For example, the Administration announced its intentions not to promulgate various appliance efficiency standards required by law.

As is illustrated here, the Administration has had some success in administrative actions to partially deregulate energy sectors. It also had some success legislatively, due to some extent to a willing Congress. For example, during the 97th Congress, Congress made DOE's Building Energy Performance Standards (BEPS) voluntary, rather than mandatory, and removed the "off-gas" provision of the Fuel Use Act in the 1981 Reconciliation Act. In the NRC authorization bill, the Congress gave the NRC authority to issue temporary operating licenses through 1983 to plants completed before the conclusion of the NRC public hearings part of the licensing process, and overturned a recent court case requiring such hearings on all licensing amendments, regardless of their impact on health or safety. While some moves were generally the result of legislative initiatives, the Administration generally supported them as consistent with its policies.

The Administration, however, failed to sustain a significant effort against several major deregulation issues. When the Administration entered office, legislative initiatives to deregulate natural gas, easing the Clean Air Act, and add cost-effectiveness criteria to environmental regulations were at the top of the agenda. However, after two years, none of these initiatives have been enacted. Indeed, the Administration provided only limited leadership to both natural gas deregulation, where opposition has been so intense that the Administration never even sent up a proposal, and revision of the Clean Air Act, where the Administration only provided a list of "guidelines" for revisions, rather than a concrete proposal.

Hence, after two years, the Congress continues its slow, selective movement on energy deregulation begun in the previous Congress. The Administration has succeeded in speeding up the movement in some areas through some legislative and administrative action, but has been unsuccessful in other major areas to affect current law.

EMERGENCY PREPAREDNESS

On September 30, 1981, Presidential authority to impose comprehensive price and allocation controls expired with the Administration's blessing. The Administration opposed extending price and allocation controls and any Federal intervention in the marketplace during petroleum shortages, with the exception of the Strategic Petroleum Reserve. In the event of a shortage, the Administration proposed: (1) maximum reliance on the free market to determine reliance on the free market to determine energy prices and allocation, and (2) full participation in the International Energy Agency's (IEA) oil-sharing program. The Administration also supported rapid filling of the Strategic Petroleum Reserve (SPR) and encouraging stock buildups in the private sector as an additional hedge against a disruption.

The Administration sees contingency planning as unnecessary and counterproductive, anticipating that the details of any government decision will depend on the specific circumstances surrounding the disruption. The Administration apparently fears that the mere existence of authority to impose controls may send an inappropriate signal to the private sector regarding Federal intentions.

This refusal to consider standby authorities broght the Administration into direct confrontation with a majority of Members. While Members had doubts about the effectiveness of any controls, they were skeptical that the free market would function swiftly enough under all circumstances to provide for critical needs. Senator James McClure asserted that: "We cannot responsibly be dependent on anything less than full preparation after expiration of EPAA [standby authority statue]," and that the Administration must be fully prepared "should Federal action become necessary to supplement the market mechanism."

However, the Administration proved to be intransigent. A bill to restore the standby authorities (S. 1503) was vetoed by the President and sustained by the Senate in March 1982. Congress was forced to accept a weaker bill (P.L. 97-229) requiring the President to submit a description of his current authority and options in responding to a disruption. The law also requires the President to continue collecting price, supply, and distribution data on a state-by-state basis and to submit reports on the various economic impacts of a free market approach to oil disruptions and various implementation strategies for the Strategic Petroleum Reserve. With the continued excess supply of oil in the international market, however, the issue lost its emotional impetus in the latter part of the session.

FEDERAL BUDGET PRIORITIES*

The most publicized aspect of the Administration's energy policy was its energy budget priorities. In requesting significant changes in existing energy funding, the Administration's goals were twofold: (1) change energy budget priorities to reflect its view of government's role in energy policymaking, and (2) dismantle the energy policy infrastructure which supports energy priorities incompatible with its energy philosophy. Hence, the battle over the budget was more than a conflict over money, but included a debate over the nature and locus of energy policymaking as well.

This debate was particularly intense with respect to research and development priorities and funding for conservation grant programs. These are discussed below.

Research and Development. The largest reduction in DOE's budget during FY82 and FY83 was in research and development; During the Carter years, funding was increased significantly for several parts of the energy R&D, particularly for renewable energy resources, conservation, and fossil fuels. Funding for nuclear was not increased as President Carter regarded nuclear power as a fuel-source of last resort.

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* For a further discussion of the Administration's budget requests, see chapter III.

The current Administration believes that the government's role in R&D should be restricted to funding long-term, high-risk, and potentially high-payoff technology. Based on their interpretation of these terms, President Reagan's energy research and development budget requested deep cuts in the three fuel-sources emphasized by Carter, while maintaining nuclear funding at current levels. Such interpretations were based on an idealized market where any demonstrated technology has an opportunity to be developed, dependent only on its own commercial attractiveness. Proponents of renewable technologies felt that such a view of the market discriminated against some technically simple renewable technologies and conservation, which were considered both feasible and short-term in the view of the Administration. However, other technologies, such as advanced nuclear ones, are longer-term and technically complex. These received more funding from the Administration.

As noted, besides "long-term" and "high-risk," the Administration's view of research and development also carried a cost-benefit quotient--"high payoff." This last criteria also influenced Administration judgments about specific technologies. For example, magnetohydrodynamics (MHD) may be a long-term, high-risk technology with a potentially high payoff, according to some experts, if developed. However, because the development costs for such technology is expensive and, according to the Administration, uncertainty exists regarding its payoff potential compared with its development costs and potential alternatives, the Administration requested elimination of all funding, stating:

> MHD is a long-term technology which, relative to other Agency funded advanced electricity generating technologies under development, has much higher development risks and costs. Moreover, the other alternative electricity technologies may be ready for commercial introduction much earlier than MHD. Because of these factors, and in light of the overall fiscal stringency in the budget, the Federal MHD program is being proposed for termination. 19/

Hence, the terms "long-term, high-risk, high-payoff" created a window of appropriate technologies for Federal funding--the effect of which was to consider some renewable technologies not long-term or high-risk enough, but consider some technologies like MHD too long-term and too high-risk for the potential payoff to receive government funding.

19/ U.S. Department of Energy. Budget Request for FY83.

To opponents, this "window" of appropriate technologies seemed designed to permit only nuclear technologies to receive funding, while other non-nuclear R&D programs (renewables, conservation, fossil) were proposed for elimination. For the opponents, the dramatic cuts in non-nuclear programs contrasted strongly with the continued funding of the Clinch River Breeder Reactor. To opponents, this situation represented a fundamental inconsistency in the Administration's budget request. If the focus of R&D is on long-term, high-risk technologies, then the building of a near-term demonstration reactor using proven technology woud not be allowed, as in the case of DOE's synthetic fuel demonstration program of which the Administration did request elimination. To the Administration, Clinch River represented the orderly development of high-risk, long-term, high-payoff breeder technology.

The Congress refused to fully accept the President's R&D priorities, particularly in conservation, solar, and fossil fuels. Agreeing that the energy R&D budget had to reflect the austerity beging asked of the rest of the non-defense, non-entitlement budget, the Congress significantly reduced funding for energy R&D, particularly coal, renewables, and conservation. However, the Congress refused the president's request for the wholesale elimination of many non-nuclear R&D programs. Instead, it sought to redistribute the cuts and maintain a wider diversity of energy activities.

Grant Programs. As noted earlier, the Administration believes that equity questions should be dealt with separately, not as part of energy policy; that either Federal social policy, or State and local communities should be responsible for assisting the poor. Under previous Administrations, DOE's mission had included programs to assist low-income persons with their energy bills through weatherization, schools and hospitals with various conservation measures, and States in developing and administering State energy conservation programs. Feeling that higher prices were a sufficient motiviation to conserve energy and that other government agencies should provide assistance to the poor, the Administration recommended the termination of these programs.

Congress found this reasoning inadequate, particularly with respect to weatherization. The Congress funded all but one of the conservation grant programs, and directed DOE not to add new restrictions to weatherization grants than had previously existed. As with R&D, the Administration succeeded in significantly cutting funding for conservation grant programs (55 percent from FY81 to FY83), but was not successful in eliminating them.

LEASING

The Administration emphasis on increasing energy supply is nowhere more evident than in the leasing of Federal lands, both onshore and the Outer Continental Shelf (OCS). Using the significant discretionary authority provided the Department of Interior Secretary under various statutes, the Administration has accelerated leasing on these lands by modifying leasing procedures used in the past. In July 1982, Secretary Watt presented an accelerated 5-year leasing plan to open nearly the entire OCS to oil and gas development. By opening up such a vast area, the Administration wants to allow industry to choose the appropriate tracts for development.

This belief that industry should determine the areas for development is also being followed in onshore leasing procedures. For example, under the previous Administration, the government attempted to determine future demand for coal to decide how much coal to lease. Also, the Department of Interior would determine a "fair-market" value of the coal being leased to ensure a reasonable return to the Federal government.

The Administration opposes this approach. As with OCS leasing, the Reagan Administration believes that private industry should make these determinations, not the government. Hence, the Administration has attempted to accelerate the delineation of lands available for leasing from protected areas such as wildernesses, and to open much greater areas of Federal lands to energy development.

Such efforts have stimulated great opposition in the Congress. In 1981, upon hearing that the Administration was considering leasing in the Bob Marshall, Great Bear, and Scapegoat wilderness areas in Montana, the House Interior Committee used a provision of the Federal Land Policy and Management Act to withdraw those areas from oil and gas development. In 1982, the Congress reinforced its concern regarding leasing in wilderness or wilderness candidate areas by attaching a provision to the FY83 Department of Interior Appropriations Bill 20/ prohibiting DOI from issuing leases in such areas through FY83. Such a provision leaves DOI with only the last three months of 1983 to issue leases in these areas before the permanent ban provided in the 1964 Wilderness Act takes effect. Of course, such action did not effect leasing in non-wilderness areas where DOI held the largest coal leasing sale ever in the Powder River Basin of Wyoming in the summer of 1982.

Opposition to the proposed OCS schedule was just as intense, although not as effective. Opponents to the

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20/ P.L. 97-394.

sale were unsuccessful in passing amendments to suspend execution of the plan; however, some actions were taken. Congress succeeded in attaching another provision to the Department of Interior Appropriations bill prohibiting drilling off central and northern California. Also, Senator Weicker persuaded Secretary Watt to reassess the plan and consider revisions given congressional opposition.

Generally, the Administration has been successful in opening up more Federal lands for leasing, despite opposition from environmental interests, and debate regarding the current need for some of the resources offered, such as coal. Because of the discretionary authority provided the Secretary of Interior in the various leasing acts, it has been difficult for Congress to interfere, requiring the Congress to initiate and to pass special amendments to prohibit specific Department actions. However, the Congress did precisely that with respect to leasing in wilderness lands. If the judicial avenue taken by opponents fails to slow down or suspend the Administration's leasing plans, more such amendments are possible in the 98th Congress.

FEDERAL ENERGY ORGANIZATION

As illustrated by the opening quote by the President, the Department of Energy was targeted by the Administration as an obstruction to solving the Nation's energy problem. The DOE is the major symbol of the previous Administration's energy policy, occupying a central role in the formulation and implementation of that policy throughout the Carter Administration. Although the Administration announced its intentions to dismantle DOE as one of several budget cutting measures, the move was seen by critics as largely symbolic, because little money would be saved through abolition that could not be saved through simple cuts in the DOE budget. Most programs were proposed to be moved en bloc to either the Department of Commerce, Interior, or Agriculture.

Without a clear indication of cost savings, the Administration found it difficult to sell the dismantlement proposal to Congress. Many Members felt that given the importance of energy to the economy, the international nature of the energy market, and uncertainty regarding some future disruption, that an energy department was necessary as a focal point for U.S. policy, research, and response. Also, the proposed reorganization tended to downgrade the importance of non-nuclear energy sources in the organizational structure, which upset supporters of those technologies. Hence, many Members felt that to accept the dismantlement of DOE was to accept the Administration's approach to energy.

Indeed, the dismantlement proposal suffered numerous delays as the Administration bargained with Senate leaders over the dismantlement of DOE function. The final proposal which emerged emphasized a "merger" of the DOE and Department of Commerce, rather than dismantlement of DOE. However, this change of emphasis was insufficient for the bill to receive much attention during the 97th Congress.

Indeed, the Congress moved in the second session to protect DOE from reductions-in-force planned by the Administration. In an unusual step, the Congress mandated in the FY82 Supplemental Appropriations bill specific personnel floors for the various offices within DOE. By doing this, the Congress prevented a de facto dismantlement of the agency by administrative action.

Conclusion

The above discussion suggests that the Administration has successfully impressed the Congress with the need for fiscal austerity in energy programs, and initiated actions to reduce regulation of some energy sectors and increase leasing from Federal lands. The result has been to lower the Federal profile in some energy activities, such as R&D. However, the Administration has failed to pass some major legislative initiatives to change both the product and locus of energy policymaking, such as DOE reorganization and natural gas deregulation.

From the embargo to 1981, the Federal Government struggled to define a new energy policy system: a system to meet the new reality, not only of OPEC and the national security threat it represented, but also of other emerging concerns regarding environmental protection and growth in general. For all of these interests to compete effectively, the Federal Government became a forum for energy policymaking, and for that eight-year period, the Congress attempted to delineate boundaries on the size of that forum in terms of scope and participants.

In 1977, the Congress institutionalized this forum in the Department of Energy. Here, the various interests were provided access to the Federal Government policymaking apparatus. However, due to a variety of reasons, the community never coalesced in the Department, thus paralyzing the effort.

The current Administration initiative would scrap the idea of building a diverse energy policy community within a government forum, and return primary energy policymaking to market forces and to the energy industry. In doing so, the Administration's action would change the scope of energy policymaking and its participants by turning previously public decisions into private and market decisions. Such actions would reduce Federal involvement in energy policymaking, and move private economic considerations and potentially, State and local governments, to the forefront in energy decisionmaking.

In response to the current Administration's program to reduce the Federal role in energy policy, the 97th Congress has accepted some, moderated some, and essentially ignored other Administration proposals. Recognizing a need to increase economic efficiency in energy policy, it continued the selective movement toward decontrol and deregulation from the previous Congress. However, as with previous Administrations, Congress did not accept en bloc the Reagan Administration's reordering of national energy priorities. Rather, Congress eliminated some government interventions while refusing to eliminate others. A congressional consensus developed over the past ten years, and two disruptions prevented the Congress from abrupt philosophical swings.

With increasing need for fiscal restraint and a quiet international situation, the 98th Congress confronts the problem of complacency. If the current congressional consensus continues to hold, then attention to budget priorities and oversight of administrative actions may be necessary to continue the slow evolution of U.S. energy policy. How rigorously the Congress may decide to pursue these efforts depends in considerable part on the Administration. If, after two years, the Administration decides to accept the congressional consensus and submit budget requests more in line with congressional thinking, then energy policy concerns will be discussed at the margin, rather than at the fundamentals. If not, then the experience of the 97th Congress of rewriting the budget, mandating administrative actions, and criticism of Administration policies may continue into the 98th Congress.

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